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Fortnightly Review

Ignoring the Public

WHO are America's leaders in aviation? And after you have answered that—are they the only people to be consulted in making national plans for aviation?

In our January 15 issue of this publication we carried a news story reporting that the N. A. A.-sponsored First National Aviation Planning Conference was a flop—small attendance—lack of leadership—results pathetic—etc.

That flop was unnecessary in our opinion, casts no reflection upon the fine constructive work and spirit of N. A. A. chapters over this nation, and most certainly does not indicate that the American public is losing interest in properly directed aviation planning conferences. The Northwest conferences have been well run. The Western conference in Sacramento last fall was a success. And we predict that the scheduled Southwest Aviation Planning Conference for Oklahoma City, March 11 and 12, will be a success.

Why did the Cleveland conference flop? In announcing in the January issue of *National Aeronautics*, N. A. A. house organ said: "One thought, one purpose: to gather together America's leaders in aviation, to work out a program which will best advance aviation during the coming year."

There, in our opinion, is the reason for the flop and the reason why N. A. A. has been tail spinning, so far as national leadership is concerned, during the past year or two. For whether we like it or not, America's leaders in aviation cannot get together and work out a

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Roosevelt Gives Suggestions To Lea on Air Legislation

Emergency Dumping Tests Made By BAC

The Samoan Clipper crash Jan. 11 revived comment about the order issued by the Bureau of Air Commerce Oct. 9 sealing all emergency dump valves. Under this order pilots of domestic transports could not release excess fuel to lighten their loads in case of emergency landing.

The Sikorsky S-42-B, however, did not come under that ruling, since it was not carrying passengers and was operating under a special provisional loading certificate granted by the Bureau just before Christmas. This approval called for carrying 2,000 more pounds than the 42,000 pounds for which the clipper had been previously authorized to carry.

The order sealing emergency dump valves came following a test with a new Lockheed 14. A special cleaning fluid mixture, perfumed and colored, was placed in the reserve gas tanks of the Lockheed. Bureau officials report that when the emergency valve was opened, the fluid streaked over the plane and if the fluid had been gasoline, the ship would have blown up. Perfume was used to determine if vapors entered the cabin, and inspectors found that the perfume did enter the cabin.

The Bureau is now conducting exhaustive tests on all emergency dump valve systems, which vary greatly according to make and type of ship. At least one type of emergency valve, by which the excess gasoline is let out far behind engine exhausts, has been approved. It is understood, however, that no transport operating today carries a load in excess of that making for safe landing at normal speeds and no provisional loading approvals will be given to transports carrying passengers until emergency dumping valve systems are such that an explosion would not occur if used.

Aids Legislation



Representative Clarence M. Lea, California Democrat and co-author of the McCarran-Lea Bill, who is playing a leading roll in obtaining aviation legislation at the 75th Congress.

ries a load in excess of that making for safe landing at normal speeds and no provisional loading approvals will be given to transports carrying passengers until emergency dumping valve systems are such that an explosion would not occur if used.

Loening Issues Statement to Press, Then Retracts, As Crash Aftermath

Talk of Washington following the unfortunate accident of the Samoan Clipper in the Pacific was the 458-word telegram which Grover Loening, aeronautical adviser to the U. S. Maritime Commission, sent to more than a dozen newspapers berating Pan American Airways and blaming the clipper crash on "the insatiable ambitions of this company."

Fortunately for all parties concerned, the telegram reached print only in one newspaper, the first edition of *The New*

York Daily News. Loening followed up his wire with telephone calls from his Palm Beach home hastily withdrawing his statement and all newspapers courteously complied with his request. Just who advised Loening that he should withdraw his statement is not definitely known, but Maritime Commission officials—particularly Joseph P. Kennedy, retiring chairman—probably had something to do with it.

Meantime two weekly news magazines (Turn to page 2)

Seventh Draft of Bill Is Completed; Provides 5 Man Independent Body; Son James is Key

CIVIL aviation was awaiting with mixed feelings, mostly hopeful, the results of the President's bid to Senator Pat McCarran and Representative Clarence M. Lea to draw up an aviation bill which would place the interests of all non-military flying under a permanent independent commission, as this issue went to press.

Representative Lea has been in frequent touch with the White House and both he and Senator McCarran were to take to the President the draft of their bill, with prospects that the pending legislation will reach Congress before many more weeks pass.

Behind the scenes three men were spending sleepless nights trying to bring into harmony the many opinions of how aviation should be handled by the government. As this was written, the seventh draft of a proposed bill had been completed, but the end was not in sight. Bit by bit, however, the various factional interests were being consolidated and merged into a bill which, when completed, is expected to be generally satisfactory.

Although both Senator McCarran and Representative Lea were taking active part in the redrafting, the men actually doing the sweating were George A. Keyser, an examiner of the Interstate Commerce Commission who has been "loaned" to Senator McCarran for the duration of Congress; Clinton M. Hester, an assistant general counsel of the Treasury Department, and Stewart Tipton, also of the Treasury Department.

Mr. Keyser represents Senator McCarran's and Mr. Lea's interests in the redrafting. Mr. Hester represents the administration's reorganization interests and as such is attempting to consolidate aviation legislation with the proposed federal reorganization program of the President. The first drafts of the bill were prepared by Messrs. Keyser and Hester, but Mr. Tipton has sat in on recent drafts. Mr. Tipton married last year Miss May Arnold, for some years secretary to Fred D. Fagg, Jr., at the Air Law Institute in Chicago.

At last reporting, the proposed bill called for an independent aviation commission responsible to the President and composed of five commissioners, each drawing \$10,000 a year. They would

be six-year appointees, although only one of the first five appointed would hold his position that long, the others being appointed respectively for two, three, four and five years. The bill also provided that private and miscellaneous flying would also come under the scope of the commission.

It seems more evident now that the President is definitely opposed to regulation by the Interstate Commerce Commission. And although the government's interdepartmental committee favored an aviation commission under the Department of Commerce (the original report called for a one-man commission), it is reliably understood that the President and Mr. Hester have not insisted on this recommendation and have agreed that the commission should have no connection with Commerce. Such a proposal could never get through Congress anyway, as the Commerce Department is not the most popular of agencies on the Hill.

With the final draft of the bill yet to be completed and with another visit by Messrs. McCarran and Lea to the White House yet to be made, any conclusions are futile at this time. But there still remained a spirit of harmony in all camps.

Railroad, railroad labor and insurance companies indicated they wanted aviation regulated by the I. C. C., which might lead to a serious fight in Congress as these groups wield much power. But it remains to be seen whether these groups have merely expressed an opinion or whether they will actually make a fight in that direction.

Aviation labor elements were standing by, somewhat skeptical of an independent commission, but awaiting final results of White House conferences.

Key man in the picture is James Roosevelt, who is secretary to his father. From all indications he is sincerely interested in trying to bring about a satisfactory and harmonious solution to aviation problems through legislation.

LOENING

(Continued from page 1)

got hold of the story. *Newsweek* for Jan. 24 even went so far as to publish extracts from Loening's telegram and said "No one had sounded off on aviation with such recklessness since 1925 when the late Gen. William Mitchell told the world what he thought of the United States Army air force." *Time* printed nothing of the telegram but called it the "most amazing reaction" to the crash and termed the telegram "furious," adding that "Hastily Critic Loening retracted his telegram."

While there was some talk in Pan American circles of instituting a libel suit against Loening, most aviation people wanted the subject dropped, knowing that the less said about the matter the better. Apparently it was a case of Loening's personal opinions getting the better of himself without realization that a government official is always a government official while on the federal payroll and that anything said by such an official is irretrievably linked up with the government position. Loening apparently wanted to speak as a private citizen, which was impossible under the circumstances. Loening can thank the newspapers for protecting him in an unguarded moment.

Whatever doubt there has been about Loening's bitterness toward Pan American quickly melted away in the face of his telegram to the papers. Although a former director of the airline, and at least until recently, a stockholder, Loening gave vent to feelings he has long held that Pan Am should stick to South America and not expand all

over the world. Loening said in his wire that the New Zealand route "was neither necessary nor desirable as yet" and said "the accident brings into focus the monopolistic aims of one company in a tragic blunder of overexpansion, underpreparation, and overworking of its personnel and of its old equipment."

Loening said the Samoan Clipper was "one of the oldest type clippers in their service", which, factually, is not true, as the Sikorsky in use was certainly not the oldest type and had been proven to be the best experimental type available in the world today for such pioneering, although of not sufficient size to provide for passenger service over long water hops. Also Loening referred to "dream ships" which Pan Am has on the drawing boards but failed to mention the six 72-passenger Boeings now under construction.

It is not expected that any more will be heard of the whole business.

Airline Maintenance Men Meet at Dallas

Dallas, Jan. 15—Two hundred airline engineers and maintenance personnel, and representatives of the Army, Navy, airplane manufacturers, aviation schools, government agencies and accessory manufacturers, were guests of Dallas and Braniff Airways here for the eleventh semi-annual maintenance conference held under auspices of the Air Transport Association. Conference sessions were headed by H. O. West, maintenance superintendent of Trans-Canada Air Lines, and Fowler W. Barker, A. T. A. secretary.

O. M. "Red" Mosier and Reagan Stunkel, Braniff vice-president and maintenance superintendent respectively, were co-hosts. In welcoming the group, Mosier said: "In the past three years, only about 3% of air transport accidents have been directly and indirectly attributable to structural or power plant failures."

At the banquet on the second evening, H. D. Ingalls, maintenance superintendent for American Airlines, was awarded *Aviation's* 1937 maintenance award, (described elsewhere in this issue).

Tom E. Braniff, president of Braniff Airways, told the banquet gathering that helpful legislation in the form of an independent aviation commission, is about to end the inadequate handling of air transport by the Federal government and said a commission would "give our industry a chance to breathe."

Major Jimmy Doolittle told the conference of the possibilities of 100 octane fuel. Although five cents more a gallon than the 87 octane fuel used by most airlines, Doolittle said the price would come down two cents a gallon if the airlines and government services would all use it. He said 100 octane fuel would lead to startling economy. Users of a DC-3 transport, he said, could affect a savings of \$1,200,000 per airplane over a period of five years, resulting from consumption of less gas, a drastic reduction in overhaul and maintenance, and ability to carry bigger pay loads.

Other speakers included R. D. Sundell of Brownsville, chief engineer of the western division of Pan American Airways, who was elected to succeed West as chairman of the conference, and I. R. Metcalf, of the safety and planning division, Bureau of Air Commerce.

EIGHTY PER CENT of the Americans questioned by the American Institute of Public Opinion favored enlarging the government air force, the institute reported in its Jan. 11 release. Seventy-four per cent agreed that a larger navy should be built, and 69 per cent approved enlarging the army force.

House Passes Mead Bill in Surprise Vote; Would Amend '34 Air Mail Act

The House of Representatives in a surprise move on Jan. 17, passed H. R. 4732, providing for certain amendments to the Air Mail Act of 1934. The bill had been on the House Consent Calendar since May 17, 1937, and had been passed over without prejudice every time it was called. The call on Jan. 17 evidently caught the opposition napping and the bill was passed, a motion to reconsider being laid on the table.

One section of the amendment provides that no increase in air mail rate shall be allowed during the initial period for which any contract is let, and that the contractor shall be required to perform his contract for the full initial period at the bid rate.

The Postmaster General is authorized under the bill to grant extensions of air mail routes from either terminus or any intermediate point, provided that the aggregate mileage of all such extensions on any route in effect at one time shall not exceed 250 miles and that the rate of pay for such extensions shall not exceed the rate per mile fixed for the regular route. This portion of the bill is designed to clarify the Post Office's authority to grant extensions. The Post Office had formerly held that it was authorized to grant extensions from either terminus but the question as to extensions from intermediate points has not been clear.

Present rates of compensation for the carrying of the air mail would be extended for two more years under the amendment. This would change the section of the Air Mail Act which states that on and after July 1, 1938, the Interstate Commerce Commission shall keep the aggregate cost of air mail within the anticipated postal revenues

therefrom. Hearings are scheduled to be held on this matter in the ICC Feb. 1. The present status of H. R. 4732 will have no effect on the hearings for it has not passed the Senate or been signed by the President.

The bill expressly prohibits any air mail contractor from engaging in any phase of the aviation industry except the transportation of mail, passengers and express. This is aimed to emphasize and strengthen the existing provision prohibiting any connection between transportation and manufacturing companies.

Other sections of the bill require the ICC to furnish the Postmaster General copies of reports made to the Commission covering any examination of books, records, accounts, contracts and business records of air mail contractors. The ICC is prohibited from considering any application for the establishment of any air mail line or to grant any application on the grounds of public convenience or necessity.

It is expected that the bill will encounter strenuous opposition in the Senate and passage in that body is considered very doubtful because of strong Senate support for ICC control or an independent commission.

On the other hand, Congressman F. H. Hildebrandt, chairman of the House Post Office and Post Roads subcommittee, told *AMERICAN AVIATION* that should H. R. 7273, companion bill to Senator McCarran's S. 2, come up for debate and a vote in the House, it will meet with equally strong opposition. Mr. Hildebrandt stated that with control under the ICC, that body would be using the Post Office funds, and "you can be very liberal with someone else's money."

BAC Asks For Plane, Radio Station Bids

The Bureau of Air Commerce on Jan. 13 and 14 issued advertisements asking for bids on 26 airplanes. Bids were to be opened Feb. 1 in the division of purchases and sales of the Department of Commerce.

Twenty-three of the planes are to be high-wing, cabin monoplanes of new and current manufacture. Twelve ships are to be delivered with engines and 11 without. Advertisements also call for three 3-place cabin biplanes with engines. The Bureau asks trade-in allowances on five Kinner Playboys, five Monocoups, three Wacos, one Fairchild, and one pair of floats, Edo model.

Advertisements were also issued calling for bids on four BAC radio stations. Bids were asked for construction of radio facility buildings and loop antenna systems at New Hackensack, N. Y., and Putnam, Conn., and radio facility buildings and radio towers at Spartansburg, S. C., and Syracuse, N. Y. These bids will be opened Feb. 4, 7, 8 and 11 respectively.

Pilots Association

Springfield, Ill., Jan. 15—The Secretary of the State has granted a charter for the formation of the National Air Pilots Association, a non-profit organization with headquarters in Chicago. Directors are given as H. A. McGrath, Chicago; W. H. Haase, Forest Park, Ill.; Violet Westerman, Chicago; Dr. Harold M. Golden, Chicago, and G. A. Burnham, Chicago. Purposes are the fostering of aviation, promotion of legislation, cooperation with the industry, etc.

Birmingham Air Carnival

Birmingham, Ala., Jan. 24—Birmingham's 8th Annual National Air Carnival will be held this year on Saturday and Sunday, June 4 and 5. Four foreign governments have tentatively accepted invitations to have squadrons of planes present. Attracting a one-day attendance of 150,000 in 1937, it is claimed that this is the only free major air meet held annually. Steadham Acker, general chairman of the Air Carnival, has always provided enough funds to defray expenses without cost to Birmingham taxpayers or any organization.

Air Corps Age Limit Up

The maximum age limit for applicants for the air corps reserve has been raised from 30 to 35 years, the War Department announced recently, in order to make eligible a number of competent and experienced civil fliers. With a goal of 500 applicants set for the fiscal year, the department announced that 457 have been signed.

Dual Rates Reduced

Gainesville, Fla., Jan. 15—Carl Stengel, operator of one of the south's largest flying schools with 137 steady students currently enrolled, has abolished the customary extra fee for dual instruction in the belief that this will do away with the desire of students to solo before they are actually prepared. The general practice is to charge six dollars an hour solo, eight dollars dual. Stengel has lowered rates to \$5.75 per hour for dual and believes this conforms with the philosophy behind the new B. A. C. regulations.

International Air Show Opens At Chicago; Over 70 Exhibitors

Manufacturers Well Represented; Show to Continue Through Feb. 6; Sales Executives and Fixed Base Operators to Hold Meetings

With seventy-one exhibitors signed up on Jan. 10, the International Air Show was preparing to open at Chicago, January 28 as this issue went to press. Scene of activities is the International Amphitheatre and the show will continue through Feb. 6.

There was every indication that the show would be an outstanding success financially, in attendance, and to exhibitors.

Most of the large companies in the industry are exhibiting—Bendix, Curtiss-Wright, United Aircraft and others. In addition, the Chicago show has five of the major airlines, something of an accomplishment in view of general reluctance on the part of airlines to participate in shows of this kind. Those exhibiting are TWA, American, United, Imperial (British) and Pan American.

Manufacturers of private-owner airplanes are well represented. Last minute exhibitors were expected to fill up any vacancies in booth space available.

A series of meetings will draw many aviation people to Chicago during the show. The N. A. A. has both a board of governors and an executive committee meeting scheduled for Jan. 30.

Trade paper editors will meet Feb. 1 for a joint session with sales executives of airplane manufacturing companies. The sales executives will hold several sessions.

On Feb. 3, 4 and 5, fixed base operators will hold meetings in the Stockyard Inn, adjoining the amphitheatre. Invitations have been extended to operators in all parts of the country to attend.

Among speakers for these meetings are Al H. Knouff, of Swiftair, Athens, O.; Reed G. Landis, Chicago Aero Commission; Hal P. Henning, of Booth-Henning, Inc., Dallas; Hugh C. Robbins, of Cleveland; Col. Floyd Evans, of Michigan; Winston W. Kratz, president of the St. Louis Flying Service, and J. W. Borton, manager of General Airmotive, Cleveland.

Exhibitors at the show are:

Acme Welding Supply Company
Aero Digest
Aero Insurance Underwriters
Aeronautical Corp. of America
Aeronautical University
Air Associates, Inc.
American Airlines
Arens Controls
Aviation Magazine
Beech Aircraft Corporation
Bellanca Aircraft Corporation
Bendix Products Corporation
Berry Brothers, Inc.
B. G. Corporation
Blockson and Company
Breeze Corporation
Canadian Aviation
Continental Motors Corporation
Curtiss-Wright Corporation
Douglas Aircraft Corporation
Edo Aircraft Corporation
Elastic Stop Nut Company
Everell Propeller Corporation
Fafnir Bearing Company
Fairchild Aviation Corporation
Fleetwings, Inc.
Gwinn Aircraft Company, Inc.
Howard Aircraft Corporation
Imperial Airways
Irving Air Chute Co.
Jacobs Aircraft Engine Corporation
Kellett Autogiro Corporation
Kollsman Instrument Company, Inc.
Lear Development Company
Lenape Aircraft & Motors, Inc.
Lockheed Aircraft Corporation
Lycoming Motors
Maynard D'Cesare Propeller Corp.
Mercury Manufacturing Company
Monocoupe Corporation
Norma-Hoffman Bearing Company
Pan American Airways
Parks Air College
Piper Aircraft Corporation
Popular Aviation Magazine
Porterfield Aircraft Corporation
Pratt & Whitney Company

Pyle-National Company
Ranger Engineering Corporation
R. C. A. Manufacturing Company
Rearwin Airplane, Inc.
Rohn & Haas Company
Ryan Aeronautical Corporation
South Bend Lathe Works
Spartan Aircraft Company
Sperry Gyroscope Company
Standard Oil Company of Indiana
Stinson Aircraft Corporation
Street & Smith "Air Trails"
Supply Division, Inc.
Taylor-Young Airplane Company
Texas Company
Thompson Products
TWA
United Aircraft Corporation
United Airlines
Waco Aircraft Company
Warner Aircraft Corporation
Wendit Aircraft Company
Western Electric
Wright Aeronautical Corporation

Downtown show headquarters are at the Great Northern Hotel. Aeronautical Chamber of Commerce headquarters are to be at the Palmer House.

BIG L. A. EXHIBIT LIST

Southern California's National Aircraft and Boat Show Opens Apr. 2

Almost complete representation of Southern California aircraft builders and parts manufacturers is announced for the National Aircraft and Boat Show which opens Apr. 2 in the Los Angeles Pan Pacific auditorium, according to H. H. Wetzel, vice-president and general manager of the Douglas Aircraft Corporation and president of the California Aircraft Industries Association, which is sponsoring the third annual event.

"It will be the most comprehensive show of its kind in history," Clifford Henderson, managing director, reported. The exhibition is endorsed by the Civil Regatta Association of Southern California, and for some companies will be the scene of the first showing of new model sports planes. The attendance record for the show stands at 150,000.

TWA Asks Night Permit

Transcontinental & Western Air, Inc., have petitioned the Bureau of Air Commerce to operate at night between Dayton, O., and Goshen, Ind., via Fort Wayne, Ind. The company has been awarded a mail contract for the proposed service.

Huntington Mail Stop?

Huntington, W. Va., is soon to be made an air mail stop on American Airlines' Washington-Cincinnati-Chicago route, according to Post Office officials. This would make the third community served in the state, Charleston and Elkins being served currently.

DuBois SAE Vice-President

Ralph N. DuBois, experimental engineer for Aviation Manufacturing Corporation, Lycoming Division, was recently elected a vice president of the Society of Automotive Engineers to represent the aircraft engine section of the group.

New Consair V. P.

Ed Gott and H. E. Wehmiller have been elected vice presidents of Consolidated Aircraft Corporation, San Diego. Mr. Wehmiller is permanently located in Washington, D. C., as company technical representative. Mr. Gott is in Washington while Congress is in session.

Aviation Calendar

Jan. 28-Feb. 6—International Aircraft Show, Chicago.
Feb. 11—Institute of the Aeronautical Sciences, Los Angeles Branch Annual Meeting Review, Los Angeles.
Feb. 11-12—Northwest Aviation Planning Conference, Vancouver, B. C.
Feb. 11-13—Annual Meeting, Soaring Society of America, Washington.
Mar. Fourth National Intercollegiate Flying Conference, Washington.
Mar. 10-11—SAE National Aeronautic Meeting, Washington, D. C.
Mar. 11-12—Southwest Aviation Planning Conference, Oklahoma City.
April Southeastern Aviation Planning Conference, Montgomery, Ala.
April 2-10—3d Annual Pacific Aircraft and Boat Show, Los Angeles.
April 12—Aeronautic Meeting, Society of Automotive Engineers, Metropolitan Section, New York City.
May Eastern Aviation Planning Conference, Atlantic City, N. J.
June National Intercollegiate Meet.
June 4-5—8th Annual National Air Carnival, Birmingham, Ala.
June 19—2d Annual Santa Ana, Calif., Air Show.
June 25—July 10—9th Annual Soaring Contest, Elmira, N. Y.
June 28-30—Institute of the Aes. Meeting as part of Summer Meeting of the American Association for the Advancement of Science, Ottawa, Canada.
Sept. 3-5—National Air Races, Cleveland.

Johnson and Fagg to Speak at Vancouver

Vancouver, B. C., Jan. 20—Col. J. Monroe Johnson, Assistant Secretary of Commerce and Fred D. Fagg, Jr., Director of the Bureau of Air Commerce, have accepted invitations to speak at the Northwest Aviation Planning Council meetings here Feb. 11, 12.

One of Canada's outstanding pilots, C. H. "Punch" Dickens, western superintendent of Canadian Airways, Ltd., will be one of the headliners and will describe Canada's aerial conquest of the Far North. Another speaker definitely assured is K. N. Merritt, general sales manager of Railway Express Agency who will discuss freight operations.

Other prominent speakers from both sides of the border assure the Vancouver meeting of being one of the most important aviation gatherings to be held in the northwest, and the first one of the planning council to be held on Canadian soil.

Conference headquarters will be the Hotel Vancouver. United Air Lines will stage a conference party on the closing evening. Chairman of the local committee is W. C. Mainwaring, prominent business man, and vice chairman is Edwin T. Orr. Hartley Davis is secretary. Washington, Oregon, Idaho, Montana and Alaska will be represented from the U. S., and British Columbia and Alberta from Canada.

Vest Acting Chief

George Vest, formerly in charge of the Chicago office of the Bureau of Air Commerce, has been appointed acting chief of the enforcement and regulation division at Washington.

Skips City 17 Times

Yakima, Wash., Jan. 1—This city which only obtained direct air mail service a few months ago, has had plenty of hard luck getting the local citizenry stirred up about the advantages of the airplane. Because of bad weather, Northwest Airlines passed up Yakima 17 times during December, being able to stop only 14 days during the month. The city was passed up 11 times in November. Northwest is scheduled to stop once a day each way.

PILOTS INCREASE

Now Number 17,681, Gain of 1,700 In Past Year

There were 17,681 pilots and 9,152 aircraft holding active Department of Commerce certificates on Jan. 1, 1938, according to the Bureau of Air Commerce on Jan. 17. A year ago there were 15,952 certificated pilots and 7,424 certificated aircraft.

Including 1,684 uncertificated aircraft, the total number of civil aircraft on Jan. 1 was 10,836, an increase from 9,229 a year ago. Among the 17,681 persons holding certificates, 7,475 were transport pilots, 971 limited commercial, 8,604 private and 631 amateur.

California led by far in the number of aircraft, having 1,219 and had twice as many certificated pilots as the next highest state. California had 3,373, and New York second, 1,661.

Wives Go Free on UAL But Girl Friends—No!

Los Angeles, Jan. 12—Non flying husbands of air minded wives will no longer be able to say, "I would travel by air if my wife would let me." At least not during the next three weeks if they are traveling between this city and San Francisco because United Air Lines, today announced that any married man, buying a round trip ticket may take his wife with him as a guest of the company. This rate, which went into effect today, will last until February 6 and will apply to wives only. Mothers, daughters, sweethearts or girl friends do not rate this courtesy.

In announcing this innovation Homer Merchant, United's district traffic manager for Southern California, has made it plain that it can in no way be construed as a cut in fares. Two people can't take advantage of it unless they are married to each other. (Pshaw!) "It is," he said, "an educational feature designed to encourage women to travel by air. Of course we do contact many potential customers who use the old excuse, 'my wife won't let me,' and in many cases this is true. We believe that if we can get the wife to make one trip much of that will be overcome. Any way we are going to try it for three weeks and see what the result is. After all it is a trial balloon and we will find out where it lands us."

2,299 AIRPORTS IN U. S.

720 Are Partially or Fully Lighted for Night Use

There were 2,299 airports and landing fields in the U. S. on Jan. 1, 1938, the Bureau of Air Commerce announced Jan. 10. Of these, 720 were partially or fully lighted for night use.

The total included 764 municipal and 414 commercial airports, 283 Dept. of Commerce intermediate landing fields, 602 auxiliary fields, 26 Naval air stations, 61 Army airdromes, and 149 miscellaneous Government, private and State airports and landing fields.

Six states had more than 100 airports and landing fields each: California, 181; Texas, 125; Florida, 125; Michigan, 124; Ohio, 114; Pennsylvania, 109.

Sturgis With Picture Co.

Detroit, Mich., Jan. 24—Parker Brook Sturgis, until recently assistant to the vice president in charge of traffic for TWA, is now with the Jam Handy Picture Service, Inc., at 2900 East Grand Blvd., Detroit.

To Test Timm Transport

Glendale, Calif., Jan. 15—The new Timm Transport, bi-motored plane of unusual design, will be test flown within thirty days according to W. A. Timm, president of Timm Aircraft Co., Grand Central Terminal.

\$6,000,000 More for Civil Aviation

President's Budget Also Carries \$6,939,000 Increase for Military Aviation; Commerce, Weather Bureau and N. A. C. A. All Slated for Increases But Final Word Up to Congress

A BOOST of over \$6,000,000 was recommended for government departments concerned with civil aviation by President Roosevelt in his budget message for the fiscal year 1939, which starts July 1, 1938, submitted to Congress on Jan. 3.

Recommendations of the President are by no means final, however, for both Houses of Congress are expected either to increase or decrease the amounts submitted by the Chief Executive.

The military aviation branches of the government are on the books for a \$6,939,468 increase, but it is expected that this division will be materially changed.

Following is the list of increases for civil aviation as recommended by the President in his budget message:

Bureau of Air Commerce

Recommended appropriation for 1939, \$14,000,000.

1938 appropriation, \$10,878,500

The net increase for the Bureau is \$3,121,500. The estimate for the establishment of air navigation facilities is \$4,750,000, an increase of \$1,838,200. This will provide for payment of 1938 contract obligations not exceeding \$2,000,000, and for the establishment of additional aids to air navigation and the continued modernization and improvement of existing aids. The provision for authority to incur contractual obligations for establishment of aids, not exceeding \$2,000,000, is continued for 1939.

An increase of \$1,311,300 is contemplated for maintenance of air navigation facilities, of which \$187,200 is for teletype-line rentals incident to air traffic control paid in 1938 from the appropriation for aircraft in commerce, and the remainder is for operating costs of additional aids established.

The transfer of air traffic control teletype-line rentals to the appropriation for maintenance of air navigation facilities converts an apparent decrease of \$2,000 in the appropriation for aircraft in commerce into an availability increase of \$185,200 and this amount, together with a reduction of \$100,000 in the limitation for purchase of aircraft, will make available \$285,200 for additional air traffic control and inspection personnel in 1939.

A decrease of \$23,000 is recommended in the safety and planning appropriation and the salary appropriation is decreased \$3,000.

Post Office

Recommended appropriation for contract air mail in 1939, \$15,800,000.

1938 appropriation, \$14,500,000.

Recommended appropriation for foreign air mail in 1939, \$10,579,000.

1938 appropriation, \$9,810,443.

The contract air mail appropriation shows a net increase of \$1,300,000, while the foreign air mail is \$768,557 ahead of the 1938 fiscal year.

Both the domestic and foreign air mail contemplate the extension of existing routes and an increase in the frequencies of trips over existing routes. The increase for contract or domestic air mail, as it stands now, does not include sufficient funds for the establishment of any new routes. However, it is expected that Congress will increase the amount materially so

that it will be possible to advertise new routes.

U. S. Weather Bureau

Recommended appropriation for 1939 \$5,220,000.

1938 appropriation \$4,703,049.

The net increase for the Weather Bureau is \$516,951. Commercial meteorological service is listed for an increase of \$541,951, while general administrative expenses are reduced by \$25,000.

National Advisory Committee For Aeronautics

Recommended appropriation for 1939, \$1,500,000.

1938 appropriation, \$1,280,850.

An increase of only \$219,150 is shown under the regular appropriations, but the N.A.C.A. has also been recommended for a \$200,000 appropriation under the General Public Works program. This latter amount will be used for beginning the construction of a wind tunnel under a contract not to exceed \$540,000 for construction and equipment.

Of the \$219,150 increase, \$138,000 will be used for additional personnel and supplies required for operating new facilities, \$50,000 for an airplane for research purposes, \$20,000 for studies in aircraft materials, and \$11,150 for other operating expenses.

Following are the recommendations for the military aviation branches of the government:

Army Air Corps

Recommended appropriation for 1939, \$89,926,426.

1938 appropriation, \$77,978,160.

This net increase totals \$11,948,266 and includes contract authorizations and salaries for the office of the Chief of the Air Corps.

Of the increase, \$5,457,108 represents the difference between the amount required for payments under the contract authorization in 1938 and the amount required for such purpose in 1939. Salaries in the office of the Chief of the Air Corps are increased \$9,700, from \$232,860 in 1938 to \$242,560 for 1939.

The balance of the increase consists principally of \$500,000 for the procurement of new models of equipment for airplanes in service; \$3,143,440 for the procurement of spare engines for new aircraft in a ratio of 75% instead of 50%, which latter ratio has proved inadequate; \$1,623,145 for

maintenance of airplanes, due to a larger average number of planes to be maintained; \$1,276,338 for procurement of fuel and oil, due to a larger average number of planes to be in operation and to increased costs of higher grades of fuel, and \$801,636 for labor and material for the maintenance and operation of depots, stations and organizations, due to the expansion of the Air Corps.

The 1939 estimates for the Air Corps of the Regular Army provide for the procurement of 394 new planes and in the estimates for the Organized Reserves and the National Guard provision has been made for the purchase of a total of 80 planes.

The Organized Reserves receive an increase of \$976,974 for the pay and allowances of 307 additional Air Corps Reserve officers for detail with the Regular Army Air Corps, this additional number being required to supplement Regular Army Air Corps officers by reason of expansion of the Air Corps. The Organized Reserves also receive an increase of \$651,734 for active and inactive flying of Air Corps Reserve officers for training.

Provision is made in the 1939 estimates for detail on extended active duty with the Regular Army Air Corps of 857 Air Corps Reserve pilots.

Bureau of Aeronautics, Navy

Recommended appropriation for 1939, \$44,170,000.

1938, appropriation \$49,500,000.

This Bureau received the biggest cut, but this is expected to be greatly reduced before it reaches final form. The decrease at present amounts to \$5,330,000. An increase of \$30,000 in salaries, which is a separate fund, reduces this cut to \$5,300,000.

The estimate for construction of naval aircraft has been decreased \$7,048,000, from \$30,203,000 in 1938 to \$23,155,000 for 1939. An explanatory note in the book containing the budget states that "the amount requested for replacement of aircraft will be sufficient to maintain naval aviation at its present high standard of efficiency and provide some increase in the number of planes."

Development of the naval air station at Alameda, Calif., and the providing of quarters for naval personnel at the Norfolk, Va., air station is to come out of the \$10,787,000 appropriation recommended under the head "Public Works, Bureau of Yards and Docks."

There are some other major projects not pertaining to aviation which will also come out of this appropriation.

Coast Guard Aircraft

Recommended appropriation for 1939, \$785,187.

1938 appropriation, \$878,687.

Although on the face it would appear that the 1939 estimate is a reduction, it is really an increase of \$270,000, because \$363,500 of the 1938 appropriation, which was marked for new airplanes, was put in reserve and has never been available to the Coast Guard. Unless it is made available before the end of the fiscal year 1938, and prospects are slim that it will, it automatically returns to the Treasury.

The 1939 estimates provide \$785,187 for repairs to Coast Guard aircraft and \$270,000 for new airplanes.

Alaska Communications System, Signal Corps

Recommended appropriation for 1939, \$187,600.

1938 appropriation, \$166,338.

The increase in this case amounts to \$21,212. It is not known how the increase will be used.

AERO CP. PROMOTES

Reif, McFarland Advanced in Aeronca Engine Division

Cincinnati, Jan. 20.—The Aeronautical Corporation of America recently announced the promotion of D. L. Reif to the position of engine manager of the Aeronca Engine division. Reif will have charge of all matters pertaining to the various power plants used on Aeronca airplanes. W. J. McFarland has been named to fill Reif's old job as superintendent of the Aeronca Engine division.

Before coming to the Aeronautical Corporation in 1929 as assistant to Robert Galloway, then chief engineer of the Aeronca Company, Reif was employed by the International Aircraft Company of Anchor, Ohio. He also taught aircraft engine design in the Cincinnati schools for several years and is well known as a marine engineer. He holds the McFarland Trophy for outstanding accomplishment in motor boat racing.

McFarland has been assistant to Reif for the past two years. Previous to this he worked with the All-Metal Aircraft Company and was also service representative for the Lincoln division of the Ford Motor Company.

Thompson Prize to \$4,000

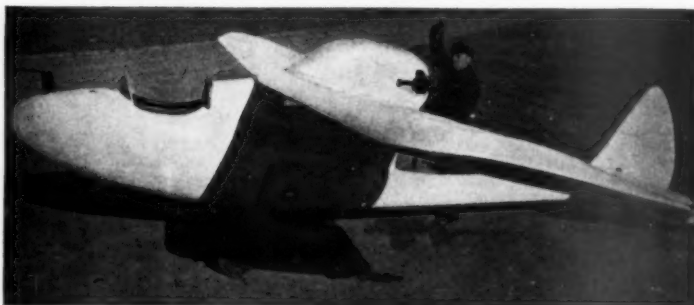
If the winner of the Thompson Trophy Race sets a new speed record for that event in the Cleveland Air Races next September he will be awarded \$4,000 in cash and a plaque by Ludlum Steel Company, Springfield, Mass. Last year the firm initiated an award of \$2,000 but no new record was set. Consequently the 1937 money is being added to the 1938 prize.

New BAC Examiners

During December, the following physicians were authorized to act as medical examiners for the Bureau of Air Commerce in the cities listed: Huntsville, Ala., Dr. James B. Laughlin; Vicksburg, Miss., Dr. Guy P. Sanderson.

The following physicians are no longer conducting examinations for the BAC: Dr. Chester C. Sloan, Moline, Ill.; Dr. Roscoe F. Millet, Glasgow, Mont.; Dr. William S. Piper, Clearfield, Pa.

Latest of Russia's Tiny Planes



A group of students of the Zhukovsky Military Aviation Academy in Moscow designed the small airplane shown above. It's powered with a 25 h. p. motor and is said to have a speed of about 70 m. p. h. It is shown on Tushino Air-drome, Moscow. *Sovfoto.*

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A REGULAR COURSE OF
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NEVER before has any new plane received more enthusiastic response than the new 1938 Cub models. There's no doubt about it—air-minded America wants these smart, trim, dependable, economical ships—and the free flying course that enables the purchaser to learn to fly under government licensed instructors at no cost! If you have longed to have and fly your own plane, here's your big opportunity.

There are two splendid dual-control planes from which to choose. The Cub Sport with its roomy, weather-tight cabin upholstered in whipcord, its deep, wide seats and many mechanical refinements gives an amazing amount of luxury and comfort for only \$1395. The Cub Trainer at only \$1270 provides safe, dependable and economical air transportation at the lowest price in the field. Your Cub dealer will gladly give you a free flight demonstration.

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Send today for full details on the free flying course, free Cub folder, and name of your Cub dealer. Paste coupon on penny post card, if you wish. Piper Aircraft Corporation, 28 V Street, Lock Haven, Pa.



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28 V Street, Lock Haven, Pa., U. S. A.

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COUNT THE CUBS

THE WORLD'S FASTEST SELLING AIRPLANE

Pan Am Bids \$0.00001 Per Pound For Bermuda Mail; All-Time Low

Could Have Received Only \$2600 A Year at Maximum Rate,
So Company Decides to Go Limit; Amounts to
1¢ A Year

Pan American Airways submitted what is undoubtedly the lowest air mail bid on record when the Post Office Department opened bids on Jan. 15 for Foreign Air Mail Route 17, between New York and Bermuda. Pan Am's bid was \$.00001 per pound. (If air mail bids go to further extremes, this magazine will have to acquire a statistical and mathematical department. The best the staff has been able to do is to calculate Pan Am's bid at 1 cent per year. It can't be much more but it can't be much less either.—Ed.)

Apparently Pan Am's bid is lower by a few cents than Pennsylvania-Central Airlines' bid on the Washington-Buffalo domestic route, which was \$.000875 per mile, but comparison is somewhat difficult because the Bermuda air mail contract is the first route to be let on a poundage basis. All other routes have been let on a mileage basis.

Pan Am was sole bidder. Only a few persons were in the office of Harlee Branch, Second Assistant Postmaster General, when the bid was opened. Among those present were Robert Thach, General Counsel, and Col. J. Carroll Cone, manager of the Atlantic Division, both of Pan Am; and Thomas J. Knowles, Washington representative of the American Zepelin Transport Corp., who did not submit a bid.

The bid read: "\$0.00001 for carrying 800 pounds of air mail offered or a less amount, but not exceeding compensation at the rate of \$2.00 per statute mile plus a rate of \$.000005 per pound per thousand statute miles or pro rata thereof for greater or less mileage for transportation in the same aircraft for any mails in excess of 800 pounds."

Very Little Mail

It is not expected that there will be more than 25 pounds of mail per trip. In fact, Mr. Branch testified before the House Committee on Appropriations that "it probably will not be over 15 or 20 pounds."

If the contract had been advertised on a mileage basis, as are all other foreign air mail routes, the maximum cost to the Post Office Department could have been \$7,164 a week at the maximum mileage rate of \$2. Under the present poundage scheme, the Post Office pays only for mail actually carried. The maximum cost under this plan could have been slightly under \$50 per trip had Pan Am bid the maximum amount under the law. But having bid \$.00001 per pound, the cost to the Post Office will be the lowest legal payment possible.

"If we had bid the maximum amount, we would have received only about \$2600 a year," one Pan Am official said. "So we decided to enter a nominal bid since we are operating the route anyway."

The Bermuda mail service is considered temporary for two reasons. One is that it may be discontinued when trans-Atlantic service starts, the Bermuda mail being carried as part of this service, and secondly, pending legislation may alter the status of air mail if enacted. The Bermuda contract will carry a clause stating that the service may be discontinued at any time.

Only air mail between New York and Bermuda carried so far is west-bound mail to this country carried by

Imperial Airways. Pan Am's bid is considered to be an expression of willingness to carry U. S. mails free as a courtesy gesture for a temporary period, since the quantity of mail available is not sufficient to make an operating profit either for Pan Am or any possible competitor.

American Export, with eyes on trans-Atlantic trade, apparently had no intention of bidding on the Bermuda service. It has no equipment. A New York and Bermuda Air Line company opened up offices in New Jersey a few months ago and has conferred with Washington officials but nothing is known of its plans and if it intended to bid on the Bermuda mail service, it apparently found the pay insignificant. At any rate, no bid was entered. Post Office lawyers began inspecting Pan Am's bid and after a report is made, the contract will be awarded.

Air Force Advocate Heads Mil. Affairs

Representative Andrew J. May, Democrat, of Kentucky, on Jan. 14 became chairman of the powerful House Military Affairs



A. J. MAY

Committee, succeeding Lester Hill, who is now a Senator from Alabama. Mr. May has been a member of the House for seven years and has been on the Military Affairs Committee during that entire time. When questioned on aviation matters, Mr. May stated that he strongly favors the enlargement of the Army Air Corps and the Navy air force, although his committee does not have jurisdiction over this latter department. He does not favor the establishment of a separate bureau to handle military aviation.

Mr. May favors the extension of military training to such units as the CCC and believes that training of pilots for use in emergency could be carried on in the same way.

Government construction of aircraft would not be a desirable thing, the Congressman believes. Private manufacturers are now equipped to handle construction in a very efficient manner, he said.

The Military Affairs Committee recently approved President Roosevelt's budget message calling for military increases for the Army Air Corps. Names Historical Secretary Historic spots of the Wild West, along routes of Western Air Express, will be described for company promotional material by John D. Giles, recently appointed historical secretary. Mr. Giles, an authority on the history of the West, declares that the WAE course retraces in part trails first made by a Jesuit priest in 1776.

Later, the same trail was used by pioneers. North from Salt Lake City the air route passes over Corrine, known in early days as the junction from which wagon trains departed for Idaho and Montana points.

PLANES VS. SHIPS

Cost of One Battleship Equals
200 Bombers

For every battleship costing \$60,000,000, the U. S. Government could purchase nearly 200 modern bombing planes which could be shuttled from California to the Atlantic coast in a fraction of the time and at the same expense involved in the movement of one surface ship between the two areas, Senator Robert R. Reynolds, of North Carolina, told the United States Senate Jan. 10.

"A Boeing bomber, B-17, will cost our government, fully equipped, ready for action, \$300,000," the speaker said. "A battleship costs \$60,000,000. Thus \$60,000,000, the cost of a single battleship, will buy approximately 200 bombers."

The Senator asserted that to move a battleship from San Francisco to New York via the Panama canal would cost \$100,000. For the same amount it would be possible to send under their own power 200 bombers, each with a crew of from 8 to 10 men and loaded with from a half to two tons of dynamite and other explosives.

"And a fleet of bombers could leave San Francisco this morning at 6 o'clock, and at 6 o'clock tonight 200 birds of battle, with steel beaks, would be cruising over New York City."

Test 2-Engine Unit Using One Propeller

Burbank, Calif., Jan. 20—Lockheed Aircraft Corp. and Menasco Manufacturing Company have been working for the past two years on a new engine development known as "Unitwin power," it was revealed here this week.

A new method of gearing is employed in the project whereby two complete and separate in-line aircraft engines are coupled together in a side-by-side position to drive one variable pitch propeller. Either engine may be operated independently of the other without any drag being transmitted from the inoperative engine. The companies claim that this gives a large safety margin in the event of engine failure. It also eliminates any necessity for synchronizing the two engines.

Test-stand runs have been under way at the Menasco factory. Two Menasco C6S-4 engines, each delivering 250 h.p. have been used in the tests. A special Lockheed Altair will be used in flight tests, which are expected to last several months.

Lockheed officials state that the "Unitwin" arrangement will probably be turned over to an associated development company for consideration as to future uses.

MARTIN TRANSPORT OK

Sea Boat to be Dismantled for Shipment to Russian Buyers

The Martin Ocean Transport, claimed to be the first flying boat ever built capable of non-stop flight across the Atlantic with passengers, completed all acceptance tests and was ready for flight to New York January 20 to be dismantled and prepared for shipment to Russia.

Launched on Nov. 22, the 46 passenger, four motored, 190-mph ship has been flown for 32 hours under varying load, balance and power conditions. Twenty-six persons are accommodated in berths. Furnishings include over-stuffed chairs, a luxurious lounge seating 16 passengers, and a specially designed table which, at night, is transformed into two wash basins with hot and cold running water.

CULBERT TO TWA

Chicago and Southern Official Becomes Assistant to Frye

Amos Culbert, until his resignation in January executive vice president of Chicago and Southern Air Lines, has been appointed executive assistant to the president of Transcontinental & Western Air, Inc., Jack Frye, president, announced Jan. 20.



CULBERT

Just thirty years old, Culbert succeeds E. Dillon Smith, recently resigned, and will make his headquarters at Kansas City. A native of Hibbing, Minn. he has lived in New Mexico, Arizona and California, where his father was a mining engineer. He is a graduate of the School of Commerce and Finance of the University of California, and received his law degree from Hastings Law School in San Francisco, a branch of the University of California. He spent one year as a seaman and has been an attorney for Pacific Seaboard Airlines, predecessor company to Chicago and Southern.

Culbert has held a number of responsible airline positions. He was general counsel during Chicago and Southern's reorganization, has been treasurer and director, and was elected to his last position during the summer of 1937. He has been admitted to the practice of law in a number of states and before the Illinois Commerce Commission, and the I. C. C. and S. E. C. in Washington. In Kansas City he will handle TWA's affairs for Mr. Frye when the latter is away from base headquarters.

I. C. C.

Pending Air Mail Proceedings

A. M. D. Nos. 1-16-15—Air Mail Compensation. Reopened for further hearing on portion of Order of June 14, 1937. Date of hearing February 3.

A. M. D. No. 15—North American Aviation, Inc. vs. American Airlines, Inc. Indefinitely postponed.

A. M. D. Nos. 17 and 36—Air Mail Rates for Rt. No. 2, operated by TWA, Inc. Hearing February 8, 1938.

A. M. D. No. 19—Postal Revenue Limitation on Air Mail Rates. Hearing February 1, 1938.

A. M. D. No. 23—Air Mail Rates for Rt. No. 8, operated by Chicago & Southern Air Lines, Inc. Examiner's proposed report in course of preparation.

A. M. D. No. 28—North American Aviation, Inc., Base-Rate Mileage: Hearing December 14 to 22, incl. Briefs due January 24, 1938.

A. M. D. No. 29—Air Mail Rates for Rt. No. 29, operated by Continental Air Lines, Inc. Pending hearing.

A. M. D. No. 30—TWA, Inc. Rate Review, 1935-36 Pending Final Decision.

A. M. D. No. 31—Western Air Express Corp. Rate Review, 1935-1936. Pending Final Decision.

A. M. D. No. 32—Air Mail Rates for Rt. No. 26, operated by Hanford Airlines, Inc. Pending hearing.

A. M. D. No. 33—National Airlines System. Rate Review 1935-1936. Pending Final Decision.

A. M. D. No. 34—Braniff Airways, Inc. vs. Transcontinental & Western Air, Inc. Pending hearing.

A. M. D. No. 35—Boston-Maine Airways, Inc. Base-Rate Mileage. Pending hearing.

A. M. D. No. 37—Delta Air Corporation Rate Review 1937. Pending final decision.

A. M. D. No. 38—Western Air Express Corp. Base-Rate Mileage. Pending hearing.

Myers Adds U. A. L. Duties

George Myers, director of flight instruction at Boeing School of Aeronautics, Oakland, Cal., has assumed the additional duties of new pilot training for United Air Lines.

THEY'LL PASS THIS ON

to you!



Members of the Texaco Aviation Division discussing engine lubrication problems with G. F. Van Skike, engine overhaul foreman.

J. D. Jernigin, Jr., Mgr., Texaco Aviation Division, discusses crankshaft lubrication with P. J. Clausen, Texaco Aviation Lubrication Engineer, in presence of TWA shop foreman.



Mr. Van Skike discussing engine maintenance.

Inspecting Cyclone G-102 engine in the Assembly Department.



Texaco Aviation Division personnel examines installation of new type experimental constant-speed propeller.



INTERNATIONAL AIR SHOW, CHICAGO—JANUARY 28—FEBRUARY 6
You are cordially invited to visit the TWA-TEXACO EXHIBIT

TEXACO AVIATION GASOLINE ★ NEW TEXACO AIRPLANE OIL FOR
ENGINE CYLINDERS AND BEARINGS, SUPERCHARGER BEARINGS AND
DRIVE GEARS ★ TEXACO OIL FOR MAGNETO AND STARTER BEARINGS
TEXACO MARFAK No. 2 FOR ROCKER ARMS AND WHEEL BEARINGS

THE PHOTOGRAPHS on this page show views at TWA's main engine shops at Kansas City, Missouri.

Here, members of the Texaco Aviation Division recently completed another course of practical maintenance work, service demonstrations and lectures, this one given by the TWA Academic Division. This course featured design, overhaul, and operation of the Wright Cyclone G-102 engine and its accessories.

This is an example of how the members of the Texaco Aviation Division keep abreast of the latest developments, and in constant touch with the practical maintenance problems of the industry in all parts of the country.

This intensified study and training equips them to give the kind of service the airlines must have . . . with fuels and lubricants that meet the most exacting demands of aircraft engine operation. The Texas Company, 135 East 42nd St., N. Y. C.



NEW TEXACO AIRPLANE OIL

Mayo Hits High Speeds, Loadings

Pioneer Transport Builder Warns Safety Should Come First; Throws Airport Problem Back to Manufacturers and Operators and Predicts Dual Wheels for Heavy Ships

THROWING the airport problem back into the laps of manufacturers and airline operators by saying that equipment should be built to fit existing facilities rather than constantly enlarging airports to make way for larger and larger transports, William B. Mayo told the First National Aviation Planning Conference in Cleveland Jan. 11 that safety is being sacrificed for increased wing loadings and speed.

Mr. Mayo, developer of the trimotored Ford transport in the days when the Ford Motor Company was involved in aviation, and now chairman of the Michigan Board of Aeronautics, told the conference that it is not at all certain that the large ships being built today are going to prove the most economical transports of the future.

He expressed the opinion that if the ratio of the power and wing loadings were properly proportioned that large planes could properly negotiate any existing airport considered good until recently.

Mr. Mayo's address follows:

There has been a great deal of discussion and publicity recently relative to the necessity for the expansion of our airports to accommodate our large transport aircraft, but I haven't seen or heard very much about what the manufacturers and airline operators are doing in an effort to build equipment that will fit existing facilities. In my opinion not enough time and thought has been given to the advisability and necessity of designing the larger planes to meet the existing sizes of our present major airports. With this thought in mind I am sure that a great deal of the future planning must be done by the plane manufacturers so that their new large ships will be so designed as to meet the requirements of existing airports with slight modifications consistent with the ability of cities to finance airport expansions.

Hysteria to Enlarge

It appears to me that in our hysteria to enlarge our airports over-night to accommodate the super airplanes of the future we may be doing the aviation industry an injustice that will reflect in its ability to get new finances as well as its ability to increase its business of carrying mail, passengers and cargo. To enlarge an airport means not only the acquisition of very costly real estate, factory and home sites and a tremendous expenditure for labor and materials for the actual improvement work but imposes a maintenance cost upon the city that will be never ending.

Furthermore, these larger craft may or may not prove to be the solution for economical transport operation and what a mistake we would make now by enlarging our airports to accommodate these large planes then discover in a few years that our present size of transport plane is the most satisfactory.

True we must insist on the maximum of safety in the airplane business but in so doing we must follow the trend of other transportation systems. Air transport operators and manufacturers should get together now and establish standards of weights and performance, keeping in mind existing airport facilities, and adhere to these standards. There is no more logic in asking cities to enlarge continually their landing facilities than it is to ask the highway departments to widen

their right of ways to 500 feet in width in order to prevent disaster if a motor car should go out of control, or to demand that railway companies raise their grade crossing clearances to accommodate motor trucks much higher than the standards long since adopted as the maximum.

Loading Figure Per Wheel

As ships get larger and the gross loadings greatly increase, the impact loadings on runways also greatly increase, which factor requires hard surfaced runways of sufficient strength to take this added impact, hence there must be some definite loading figure per wheel that the manufacturer must keep within to prevent surface failures.

I have always been of the opinion that at some time every plane may be faced with an emergency landing and probably when this occurs the pilot will be faced with landing on an unprepared or partly prepared surface which surely makes it an absolute necessity to keep the wheel loadings to a minimum. *Dual wheels and larger diameter tires* must be installed on the heavier craft, also heavy fuselage bottoms to enable a plane to slide into very short landing areas without damage to the plane or passengers.

I am of the opinion that if the ratio of the power and wing loadings were properly proportioned that large planes could properly negotiate any existing airport considered good until recently. My experience in building the Ford Trimotor proved the theory that we could make a reasonably large sized plane that not only had all the performance that any small ship had but it also would get in and out of very small airports with poor ground surfaces.

The main difficulty as I see it with the design of the larger planes is that the wing loadings have been so greatly increased as a means to get the increased speed that everything else that should be carefully considered has

been greatly sacrificed. If clipping the wings and increasing the wing loading is the main factor to gain speed then it necessarily follows that we get proportionately increased landing speeds. At present it seems impossible to get enough increased lift within flaps to bring the landing speed down to a reasonable amount, hence I am of the opinion that a great deal of thought should be given to the design to make possible the decreasing of the effective wing area in flight and the increasing of this area when landing.

High Speeds Dangerous

It is dangerous to have high landing and take off speeds no matter how large or how well runways are surfaced or prepared. While I am firmly of the opinion that the most important thing we have to sell in air travel is speed yet it occurs to me that at this time we are getting off on a speed tangent and it should be forcibly brought to the plane manufacturer's attention that *safety must be the first essential*, otherwise, eventually everything else fails.

Another factor of performance which is causing concern is the low angle of glide and climb necessitating longer runways and removal of hazards adjacent to airports. This poor performance is, of course, the result of too heavy wing or power loadings or both and must be improved by improving our power plant and adopting some method of increasing our wing area for landing and taking off.

I am sure my statement is without contradiction that every plane at some time during its life may have some kind of a forced or emergency landing away from an airport and its continued use on relatively small and rough airports requires that a plane should be constructed to be able to negotiate such landings safely and for this reason it is necessary to *keep down wheel loading* to prevent miring and turning over and to *keep down landing speeds* to a point where it can safely land in a short space on reasonably rough surfaces. Keeping these outstanding requirements in mind a plane that will meet them will also get in and out safely of nearly any existing modern airport. We all realize that high take off and landing speeds, high wheel loadings and very low angle of glide is dangerous, therefore, why build a ship with these characteristics? Have safe landing and take off speeds and safe angles for take off and glide. Get speed after reaching a safe altitude by reduction of wing area. The Bureau of Air Commerce and operators should insist on these requirements and our airport problems will be minimized.

Safety Must Come First

I believe that if the transport operators specified performance when ordering equipment similar to the policy of the Army Air Corps that the manufacturers would find a way to meet the requirements.

I beg to repeat that *safety must be the very first essential* regardless of everything else otherwise we face a problem that will eventually entirely kill air transportation, or at least greatly handicap any chance it has to become a profitable business.

In conclusion I want to state that I am not unmindful of the fact that the manufacturers have been doing a splendid job in improving the design

and performance of transport aircraft, but I feel that they must do still more. I am also aware that further enlargement and improvement of airports is most essential but let's not try to go too fast especially when it is going to put an enormous financial burden on the tax payers who support the airports. This latter responsibility, by the way, I think should soon be assumed, at least in part, by the Federal Government for an airport is as much if not more, an accessory to interstate commerce than it is a local necessity.

SEATTLE YELLS ON MAIL

Newspaper Editorial Complains of Poor Inbound Service

Seattle, Jan. 13—In a leading editorial today the *Seattle Post-Intelligencer* complains loudly about its poor air mail service from the south. The paper points out that southbound mail leaves Seattle at 8:45 p. m. in sufficient time for delivery at other coast cities in the morning's first mail.

Northbound, however, the paper said the night mail leaves Los Angeles after midnight and arrives in Seattle too late for delivery in the first mail. The editorial said it had no quarrel with United Air Lines' adding on another hour flying time for reasons of safety, but says it is "distinctly up to the post-office authorities" to change schedules back to former arrival times.

ONE AIRLINE takes you through Southern Sunshine TO CALIFORNIA

● Turning south out of New York, American's all year route takes you quickly through Washington into Tennessee's friendly climate. Continues down to Texas and then across the sunny plains and deserts of the Southwest to California. Only American uses this greater-comfort route.

CALL YOUR TRAVEL AGENT OR AMERICAN AIRLINES



AMERICAN AIRLINES
SERVICE TO 57 MAJOR CITIES

Hinged Hood



The new Ryan S-C metal cabin plane takes a lesson from automobiles with the hinged hood cowl, shown above, which provides easy access to the engine for inspection and overhaul. Supported on hinges at the top, the cowl is held by tightening clamps and two fasteners at the bottom. No special tools are required for opening or closing.

U. S. Counters Airline Suits

Files Claims for \$7,500,000 Against Airlines in Reply to Post-Cancellation Suits; Government Move Expected by Attorneys as Stall to Avoid Trial

THE United States Government, after trying delay tactics for several years on the \$7,500,000 suits which a number of airlines filed against the government following cancellation of air mail contracts in 1934, has finally answered the suits by filing in the U. S. Court of Claims on Jan. 14 counterclaims against the airlines for the amounts which the lines are seeking from the government.

The Government in its long-awaited reply, has also asked that the airlines' suits be dismissed.

The Government's reply was hastened by a motion entered last Oct. 27 by United Air Lines asking that its suits be brought to trial immediately. Previous efforts to stir the government into activity had been unavailing. Airline attorneys expected that the government would turn around and file counterclaims against the suing airlines as one more tactical stall to keep the suits from ever actually coming to trial.

Counterclaims were filed against United Air Lines Transport Corp., which has two suits pending; two against Boeing Air Transport; and one each against Pacific Air Transport, Pennsylvania Air Lines, United States Airways, Kohler Aviation Corp., and Eastern Air Transport. United Boeing and Pacific are now part of United Air Lines.

Charges Collusion

The government charges that the plaintiffs "commencing on or about May 20, 1930, and continuing thereafter on several occasions in the City of Washington, D. C., and at various other places, illegally and collusively entered into and proposed to enter into a combination with other air mail contractors and prospective contractors and others to prevent the making of bids for the carrying of mail by air over certain mail routes then in existence and over other proposed new routes, and gave or performed or promised to give or perform some consideration or thing of value for the purpose or intent of securing favorable action on air mail matters and expediting the passage of air mail legislation and to induce other persons not to bid for any air mail contract."

About the time of this "illegal and collusive" combination, the government states, the Postmaster General issued route certificates to the carriers. On Feb. 19, 1934, these route certificates were declared illegal and void because of the "combination."

It is claimed by the government that under the route certificates the carriers were paid "rates of compensation greatly in excess of the rates authorized by law."

The counterclaims state that the government is entitled to the money paid the carriers between the issuance and cancellation of the route certificates. If the Court decides that the carriers should be paid the accrued earnings, the government claims the difference between these and the amounts actually paid for the carriage of mail under the route certificates.

In addition to defenses and counterclaims, the government also filed "first special defenses" in the cases of United States Airways, Kohler Aviation Corp. and Eastern Air Transport. These defenses stated that "Congress by the

Act of June 12, 1934, limited the time within which the above titled suits could be commenced to within one year from the date of its passage; that said Act was passed by Congress on June 4, 1934, and that the above titled actions have not been brought within the time so limited; and that the Court is, therefore, without jurisdiction to hear and determine the same."

Following is a short description of each counterclaim:

United

United Air Lines Transport—this company operated air mail route 17 from New York via Cleveland to Chicago and return. The contract would have expired April 2, 1931. On Oct. 22, 1930, the Postmaster General issued a route certificate good until April 5, 1936. Between Oct. 22, 1930 and Feb. 19, 1934, when the certificate was annulled, the government claims it paid United \$3,873,344.12 for the carriage of mail over route 17. It claims this amount or, if the Court decides that the plaintiff is to be paid the accrued earnings for the period, the difference between this amount and the accrued earnings.

United also operated route 3 from Chicago to Fort Worth and return. The company was granted a route certificate on May 3, 1930. Between this time and Feb. 19, 1934, United was paid \$3,823,458.52 for carriage of mail. The government claims are the same as in the first suit.

Boeing Air Transport—route 18, from Chicago to San Francisco was operated by Boeing. Later it was granted an extension from Omaha via Sioux City to Watertown, S. D. Between the granting of the route certificate on Oct. 29, 1930 to Feb. 19, 1934, the annulment date, \$9,639,173.62 was paid to the carrier by the government. Government claims are the same as in the United suits.

Boeing

The government also filed a counterclaim on Boeing's route 5 between Salt Lake City and Seattle, Wash. The route was originally operated by Walter T. Varney and Varney Air Lines. It was sublet to Boeing on Oct. 1, 1933. The counterclaim dates from May 1, 1930, when a route certificate was granted to Walter T. Varney. Government claims it paid \$2,921,602.48 between that date and Feb. 19, 1934. Claim is the same as in above suits.

Pacific Air Transport—this company operated route 8, from Seattle via Portland, Medford, Sacramento, San Francisco, Fresno, Bakersfield to Los Angeles. It was granted a route certificate on May 27, 1930 and on July 1, 1930, was authorized to extend route 8 from Los Angeles to San Diego. Between May 27, 1930 and Feb. 19, 1934, the carrier was paid \$3,152,367.49. Claim is the same as in above suits.

Pennsylvania

Pennsylvania Air Lines, Inc.—route 11, from Cleveland to Pittsburgh, was originally operated by Clifford Ball. Ball sold out to the Pittsburgh Aviation Industries Corp., which operated the route as Pennsylvania Air Lines. A route certificate was granted on Oct. 24, 1930 and the route was extended from Pittsburgh to Washington on May 28, 1931. The government paid Pennsylvania Air Lines \$778,695.53 between Oct. 24, 1930, the date of

the route certificate, and Feb. 19, 1934. Claim is the same as in above suits.

United States Airways—The government also filed a first special in this case. Robertson Aircraft Corp., originally operated route 28 from St. Louis via Kansas City to Omaha, and the Interstate Air Lines operated route 30 from Chicago to Atlanta. These routes were consolidated into AM30, from Omaha to Atlanta, on May 13, 1931. On May 28, 1931, AM30 was extended from Kansas City to Denver, and a route certificate was issued on April 29, 1931. On June 26, 1931, the Postmaster General authorized Robertson Aircraft to sublet this portion of the route to American Airways, which in turn was authorized to re-sublet the route to United States Airways. The government claims that thus United States Airways was able to "evade the express provisions of the Act authorizing issuance of route certificates which provisions require that contractors or subcontractors shall have satisfactorily operated an air mail route for not less than two years." Between June 26, 1931 and Feb. 19, 1934, United States Airways was paid \$365,068.34 for carriage of mail between Kansas City and Denver. Claims are same as in above suits.

Kohler

Kohler Aviation Corp.—A first special defense was filed in this case. Northwest Airways operated route 9 between Chicago, Minneapolis and St. Paul, and on Sept. 1, 1930, received a route certificate. On March 1, 1933, the Postmaster General extended the route from Milwaukee via Grand Rapids to Detroit, named Northwest the carrier and recognized Kohler as subcontractor. The government claims that this extension was illegal and void because under the Act of April 29, 1930, the Postmaster General could not enter into contracts for air mail between points which had theretofore not had any service unless the contract air mail appropriation proposed to be obligated therewith should at the time be sufficient to care for such contracts and all other obligations without incurring a deficiency. The fact that the appropriation was insufficient together with the fact that Kohler had never previously operated an air mail route, render such route illegal, the government claims. Between March 2, 1933 and Feb. 19, 1934, Kohler was paid \$98,580.67. Claim is same as above suits.

Eastern

Eastern Air Transport—A first special defense was also filed. Eastern operated route 19, from New York via Philadelphia, Washington, Richmond and Greensboro to Atlanta, and route 25 from Atlanta to Miami. These were consolidated into route 19 on April 1, 1931. Route certificate was granted on Nov. 7, 1930. The certificate is claimed to be void because of the company's part in the "illegal and collusive combination." Government paid Eastern \$5,356,374.52 between Nov. 7, 1930 and Feb. 19, 1934. Claim is same as above suits.

All the government counterclaims were signed by Sam E. Whitaker, assistant Attorney General; E. T. Fell, special assistant to the Attorney General; Carl L. Ristine, special assistant

to the Attorney General, and John B. Miller, attorney.

The government action followed United Air Lines' motion of Oct. 27, last, that its suits be brought to trial immediately. The government has been seemingly unwilling to allow the suits to be heard, and the recent action is thought to be a further stall because the plaintiffs must now prepare answers to the counterclaims.

Should the cases come to trial and be decided in favor of the government without payment of accrued earnings, it would stand to collect \$30,008,665.29 from the airlines. It is not known what the total paid the carriers minus the accrued earnings is, but the government states that it is "less than the amount paid under the route certificates."

National Parks Airways, TWA, Northwest, Western Air Express and American had previously settled their suits for \$601,000. Their aggregate claims totaled \$8,841,000.

Piper Executives

Officers and directors of the Piper Aircraft Corp., formerly the Taylor Aircraft Co., are T. V. Weld, president; Walter Jamouneau, vice president and chief engineer; W. T. Piper, secretary and treasurer; W. T. Piper, Jr., assistant secretary and treasurer, and Paul A. Weld, purchasing agent. The company manufactures the Cub light plane, with plant at Lock Haven, Pa.

UNITED FLIES HIGH!



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United Air Lines

THE "MAIN LINE" AIRWAY

Lockheed 14 and Samoan Clipper Accidents Mar '38 Safety Goal

Flutter Is Apparently Cause of First Zephyr Crash; Nation's No. 1 Commercial Pilot Passes on in Pan American Accident

Scheduled air transport suffered two widely-publicized accidents the week of Jan. 10 in quick succession, thus eliminating any possibility of having an accident-clear record for the year 1938.

Both accidents were unusually unfortunate for respective reasons. The Northwest Airlines crash involved a new Lockheed 14 Zephyr, in operation only a few months, while the Pan American clipper crash involved not only the death of the country's No. 1 commercial pilot, but occurred on Pan Am's route to New Zealand which was started only a few days before the start of the year.

The Northwest crash took place Jan. 10 when the Zephyr apparently went into a spin. Eight passengers were killed plus the veteran pilot, Nick Mamer, and co-pilot, F. W. West. The accident occurred about 14 miles northeast of Bozeman, Mont.

Ranchers who witnessed the accident said the ship went into a spin 200 feet from where they were cutting timber and burst into flames as it hit the ground. Gasoline had spread over a 100-foot diameter area. The wings were sheared off. Three bodies were thrown clear of the wreck. Last radio word came from the ship at 3:05 p. m., MST. Weather reports showed that the sky over Gallatin Valley was fair at the time, but a high wind was blowing.

Officials said the pilot was north of his course, probably swerving off the radio beam to avoid tricky air currents prevalent over Bridger Mountain canyons. Postal inspectors said 808 pieces of mail were salvaged and forwarded to addressees.

Besides Mamer and West, those who died were W. E. Borgenheimer, Basin, Mont.; Al. H. Croonquist, company traffic official, of Billings, Mont.; George A. Anderson, Seattle; Walter Ton, St. Paul, a postal inspector; Douglas Mackay; I. E. Stevenson, Seattle; Ted Anderson, St. Paul, Northwest mechanic, and L. Levin, of Butte.

The Dept. of Commerce named the following to comprise the board of investigation: Judge Miller C. Foster, assistant to the Assistant Secretary of Commerce; Robert I. Hazen, senior airline inspector, and E. L. Yuravich, senior foreign airline inspector.

Tail Flutter

Apparent cause of the accident was tail flutter. A. D. Niemeyer, Dept. of Commerce inspector of Seattle, testified before the accident board Jan. 20 that both vertical fins on the tail, and the attached rudders, were missing from the scene of the crash. Apparently there is evidence that the surfaces had not been carried off by impact with the ground but had been carried off while the plane was in flight. In Washington, officials ascribed flutter as the cause. A sister ship was undergoing rigid tests and reports of these tests are expected to be combined with the accident board's report. It is understood that the Zephyr 14 underwent more tests than are usually given a new ship before an A. T. C. was granted last fall.

Immediately after the accident Fred D. Fagg, Jr., director of the Bureau of Air Commerce, issued an order grounding all Lockheed 14's, pending completion of additional tests.

Clipper Crash

The day after the Northwest crash,



Capt. Edwin C. Musick

newspapers carried stories that the Samoan Clipper, on its second scheduled trip from Honolulu to New Zealand, was missing with Capt. Edwin Musick at the controls and a crew of six other company men. On Jan. 12 radio dispatches told that the Sikorsky S-42-B four-engine flying boat had blown up with scarcely a trace left.

Musick had just taken the clipper, carrying 900 pounds of express, out of Pago Pago for the 1,806 mile non-stop flight to Auckland. About an hour after the take-off he reported an oil leak in one of the four motors. He stopped the motor, braked the propeller, and doubled back to Pago Pago. He reported by radio that he was attempting to release gasoline through the emergency dump valve, which in the S-42-B is located under the hull. Musick was cruising the ship apparently in an effort to lighten the load sufficient for landing and his last report said he was again dumping excess fuel in preparation for a landing he expected to make six minutes later. Combustion was undoubtedly the cause, either resulting from gasoline or gasoline vapors coming in contact with engine exhausts or from atmospheric causes.

Musick's crew members were Cecil G. Sellers, 44, First Officer, with a long flying record; Paul S. Brunk, 30, junior flight officer; F. J. MacLean, 42, navigator; J. W. Stickrod, 23, engineer officer; J. A. Brooks, 40, assistant engineer officer, and T. J. Findley, 28, radio officer.

In charge of the investigation is E. L. Yuravich, senior foreign airline inspector. Yuravich was in Honolulu at the time of the accident, having returned there from making the first trip to New Zealand with Musick. Yuravich is now in the U. S. It is doubtful if a public hearing will be held, since there is no tangible evidence of the crash remaining.

On the week before Christmas the Bureau of Air Commerce gave the S-42-B an approval for a provisional gross weight of 44,000 pounds, 2,000 pounds over the previously approved standard gross weight.

Ingalls of American Best Maintenance Man

H. D. Ingalls, superintendent of maintenance for American Airlines, Inc., was judged "the outstanding man in maintenance work during 1937" for all airline companies in the United States, at the Airline Engineers and Maintenance Conference which closed in Dallas Jan. 15.

The meeting was sponsored by the Air

Transport Association of America. Recommendations for the honor were made by each commercial airline, and the awarding committee was named by Aviation magazine.

The winner was born in Wheatland, N. Y., 45 years ago. After graduation from Mechanics Institute of Rochester, he was a Cunningham Automobile mechanic, from 1911 till 1914, when he joined the Curtis Airplane Motor Corporation, assisting in mechanical work on the Rodman Wanamaker Flying boat "America" and Prof. Langley's original machine which was sent to that city by the Smithsonian Institute for flight tests.

He worked on early planes and motors and was with the A. I. D. for the British government in 1916-17. In 1921, upon opening of the U. S. air-mail service he became supervisory mechanic. Subsequently he was assistant superintendent of the central division of airmail at Cheyenne, Cleveland station manager for NAT, head of engine shops and general overhaul for NAT in Chicago, and superintendent of maintenance for the South American aviation firm N. Y. R. B. A., in which capacity he set up all maintenance stations for the firm. He joined Colonial division of American Airways in 1930.

Nick Mamer Had 10,000 Hours of Flying in Log

Pilot Nick Mamer, killed in Northwest's crash near Bozeman, Mont., Jan. 10, was one of America's leading flyers. Born Jan. 28, 1898, Mamer on July 1, 1936, completed his millionth mile of flying, and had chalked up 10,000 hours during his 20 years of piloting. Like Capt. Edwin Musick, up to the time of his death, no passenger of his had ever been injured. He never stunted.

Spokane remembers him as one of the winners in the air derby race to that city from New York in 1927. Shortly after the war he opened an aviation company, and with associates opened the first plane line between Spokane and St. Paul, which was maintained for six months.

He also operated daily service between Spokane and Portland for a time, later opening a schedule with Seattle. He was a former flyer for the U. S. Forest Service, on fire patrol and map making.

At the time of his death, he held the highest rating on Northwest Airlines pilot list.

Honor Musick in Bahamas

Nassau, Bahamas, Jan. 17—All operations at Pan-American Airways' port here were halted five minutes today and the flag was lowered to half mast in honor of Capt. Edwin C. Musick and the crew of Samoan Clipper. The hotel, golf course, and race track activities also halted.

EXPANDS PARTS DIVISION

Ryan Plant Steps Up Output; Adds Exhaust Collector Rings

Volume production of exhaust collector rings, exhaust silencers, carburetor air pre-heaters and allied parts of stainless steel and inconel is announced by T. Claude Ryan, president of Ryan Aeronautical Company, San Diego.



Fred Rohr, Ryan factory superintendent in charge of the parts and equipment department, is the pioneer of the drop hammer process of manufacture, the company reports, his experience dating from 1927 and including periods of association in charge of this type of work with Prudden Aircraft, Solar, Boeing and Chance Vought prior to his Ryan connection three years ago.

At present, Ryan is producing parts for Consolidated Aircraft Corporation, and was recently awarded a contract for manufacture of exhaust collector rings for the new four-engine Douglas DC-4 40-passenger transport. Expanded facilities have made possible an increased volume of this work for these and other aircraft builders.

JAMES FRANKLIN, pilot for Penn-Central Airlines, clipped 31 minutes from the Buffalo-Washington run Jan. 17 when company officials notified him by telephone that his wife had given birth to a son in Washington while he was en route to Buffalo. The return trip was aided by tail winds.



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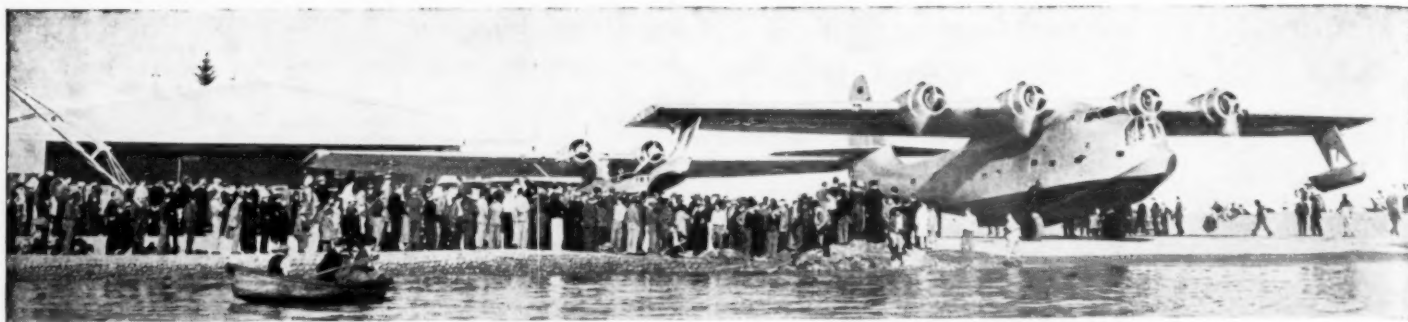
"THE COTTON KING"

◆

"The Valley Level Route"

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**Chicago and Southern
Air Lines, Inc.**



The Consolidated XPB2Y-1—Largest Naval Patrol Bomber

Latest product of Consolidated Aircraft Corporation, San Diego, is the XPB2Y-1 navy patrol bomber flying boat, which the company asserts is "the world's largest and most completely equipped naval flying fortress." Specifications and performance data are not yet available, but the recent launching was an important event on the West Coast.

Its wings are of full cantilever type, mounting four Pratt & Whitney engines of 1050 h.p. each. Hull is protected

from corrosion by a newly developed finish. Beaching gear is installed which may be removed and stored in racks within the hull. Among new features are retractable wing tip floats which in flight are drawn up to form the tips of the wings, thus increasing performance in flight. Other features include commodious sleeping quarters, galleys with range and refrigerator, clothes lockers, toilet and washing facilities, heating and ventilating apparatus, soundproofing, a workshop,

telephone system, 110-volt alternating current system, special navigation turret aft of the wing. Armament details are withheld.

Launching and test flying of the XPB2Y-1 caps a series of Consolidated developments which have attracted wide attention. On Jan. 19 eighteen PB2Y-1 two-engined bombers completed the Navy's greatest mass non-stop flight to Hawaii. They carried 127 officers and men and completed the trip in 20 hours 12 minutes. Just recently the

Navy Department awarded Consolidated a \$4,500,000 contract for 33 PB2Y-4 patrol boats, bringing production of this series to over 250 units.

Four earlier mass formation PB2Y flights have established records. Fifty airplanes have flown approximately 140,000 non-stop airplane miles in formation—the most recent (until Jan. 19) of which was from San Diego to Coco Solo, a distance of 3,087 miles, completed in 22 hours 14 minutes. Last year Richard Archbold flew non-stop from San Diego to New York in a commercial version of the PB2Y series in 17 hours and 3½ minutes, a distance of 2,600 miles. Mr. Archbold later sold his flying boat to the Soviet Government for its searches in the Arctic for the Russian flyer, Sigismund Levaneffsky and companions. Archbold has taken delivery of his second ship, a commercial PB2Y-2, which he flew non-stop to Miami.

At top: The XPB2Y-1 with wing tips lowered just before the launching.

Two views of the XPB2Y-1 taken before launching.



TWA Starts Merit Awards for Writers

A \$250 annual award of merit to the writer who produces the best informed material in the dissemination of aviation information for the year has been established by TWA. The deadline for stories entered in the first competition was Jan. 15.

A miniature reproduction of a silver trophy, \$250 in cash, and two round trip tickets to Washington where the award will be made, will go to the winning individual. The newspaper, publication or service employing him will receive for one year the large silver trophy.

Any writer in the United States who has had material concerning aviation published during the year is eligible to compete for each award, and he may submit any number of articles.

The 1937 board of judges includes: Col. J. Monroe Johnson, assistant secretary of commerce, Col. Edgar S. Gorrell, president of the Air Transport Association of America; Charles F. Horner, president of the NAA; Leighton W. Rogers, president of the Aeronautical Chamber of Commerce, and President Jack Frye, of TWA.

TURGEON FLYING SERVICE, Sky Harbor airport, Chicago, have taken over planes formerly operated by Palwaukee Airport, Inc. The new company recently purchased Taylorcraft equipment and in addition have three Cubs, a Ryan S-T, a Kinner Fleet, and a model C four-place Waco available for student and charter use. Turgeon will continue as sales agent for Waco.

TWA Suit Dropped

Kansas City, Mo., Jan. 12—Dismissal was announced today of a case filed against TWA after a 1935 plane crash near Macon, Mo., in which Sen. Bronson Cutting, of New Mexico, and four others were killed. U. S. District Attorney Maurice Milligan said he acted on orders from Attorney General Homer S. Cummings. Milligan had sought to collect a penalty of \$500 each on 11 counts alleging technical violations of the government's flying regulations.

SALEM, Mass.—In appreciation of scores of flights to aid boats and injured fishermen, Federated Fishing Boats of America have purchased a radio, easy chairs, card and reading tables, lamps and a library for two rooms in an abandoned lighthouse on the coast guard service's air base grounds.

Launches Bahama Service

Miami, Jan. 15—Regular weekly flights from Miami to Bimini, Bahamas, with the company's Sikorsky twin-motored amphibians will be started soon by Miami Aero Corporation, John P. Riddle, vice-president, announced. Capt. Robert S. Fogg, former newsreel flier and once aviation editor of the *Boston Transcript*, has been appointed director of promotion. The planes will take off from the 36th St. terminal each Wednesday, in addition to charter flights to Nassau, Havana and the Florida keys.

Plans Globe Strato Flight

MIAMI, Fla., Jan. 7—Plans for a stratosphere plane and a nonstop stratosphere solo flight around the world, possibly in June, are nearing completion, Maj. Roy W. Ammel, of New York, announced today.

2-YEAR RYAN COURSE

Stanley A. Evans Directs New Aero Engineering Studies

Addition in April of a two year aeronautical engineering course to the Ryan School of Aeronautics curriculum, including extensive studies in seaplane floats and hull design, are announced by Earl D. Prudden, vice-president of the San Diego Institution.

Directing will be Stanley A. Evans, recently of Northrup division of Douglas Aircraft Corporation, and formerly designer and technician with Handley Paige, Gloster and Heston aircraft companies in England and the Dutch National Aircraft Works. Evans was a flight officer in the RAF and saw war service in France.

Navy, Airlines, Private Flyers Disagree on S. Cal. Air Control

Three Airways Cross Restricted Area; Navy Accused of Practicing over Beam as Civilians Have Close Calls

There is a little war going on in Southern California between Navy officials and a combination of airlines and itinerant pilots over control of the air in certain disputed sections.

The territory under question extends from a point just north of Oceanside, Calif., to the Mexican border and from 25 miles out over the Pacific Ocean east to 116 degrees longitude. The Navy conducts bombing and gunnery practice within the area. Tow targets are pulled behind ships and dog fights are frequent.

All would be peaceful if the Navy had the area to itself, but three recognized airways traverse the territory and present difficulties. The Bureau of Air Commerce has designated a strip 50 miles wide for each airway, so that a pilot may be 25 miles off the direct beam and still be on his route. The direct Los Angeles-San Diego airway passes over a corner of an area 10 miles square which is supposed to be restricted for the Navy; the Tia Juana airway passes over another restricted area just north of the Mexican border, and Pan American planes pass over still another area 27 miles wide and 52 long cornering on Salton Sea.

Two conferences, one in San Diego and one in Los Angeles, have been held recently to attempt to iron out matters. They were attended by Captain Bristol and Commanders Hallard, Glover and Moore for the Navy; J. L. Kinney, Bureau of Air Commerce Air Line Inspector for Southern California; Joe

Marriott, Chief General Inspector of the Bureau; R. E. Sturdevant, BAC Manager, Airway Traffic Control, and Earl Prudden, Ryan School of Aeronautics. It is said that the parties are far from an agreement. Recommendations have been submitted to Washington, but no decision has been reached.

Navy pilots have reported that it is extremely embarrassing to come out of a 15,000-foot bombing dive and find a civilian plane directly in its path of flight, while on the other hand the private flyers say that it is disconcerting to find the air full of Navy ships or bombs, even if the latter do not contain high explosives.

One civilian pilot tells of taking off from Lindbergh Field, which, incidentally, lies completely within a Navy control zone, and suddenly finding himself heading directly for a line attached to a Navy tow target.

"It probably would have done me no harm had I hit the line," he said, "for I had a steel propeller and a lot of power behind it. We would have chewed up the rope in short order." When told that the line was not a rope but a steel cable, he said, "Well, I felt comfortable until now." Other pilots have had much to say but have declined to be quoted.

So while the Navy says that civilian flyers should not be allowed to wander around in bombing areas, the latter group states that the Navy, which is supposed to observe BAC regulations when flying in or crossing recognized

Who Started This Argument Anyway?

Lewistown, Montana, became the 171st scheduled airline stop in the U. S. on Dec. 24 when Wyoming Air Service added this community to its Cheyenne-Great Falls route. Lewistown is between Billings and Great Falls.

The *Great Falls Leader* quotes Post Office officials as saying that Montana now has the greatest number of scheduled airline stops of any state in the nation. Three airlines make a total of seven stops in the state.

According to *Official Aviation Guide*, however, the *Great Falls Leader* is slightly over-enthusiastic about Montana, for even Republican Maine, with 9 stops, surpasses Montana. Texas claims a total of 16 scheduled airline stops, California 11 (if Wilmington-Catalina Airline, Ltd., is included as it should be), and Florida has a total of 12 stops if the Key West line is included. Montana, thusly, ranks fourth. Ohio and Washington have six each. The only state without an airline stop is Delaware. Boston-Maine Airways, with nine scheduled stops in one state, can take claim for having the greatest number of stops in one commonwealth, if that means anything statistically.

airways, are using these airways for anything that suits its convenience. One private flyer complains of coming out through an overcast to find a Naval formation engaged in maneuvers directly over the beam.

The Navy wants to limit the width of the airways where they cross restricted zones, to one half mile on each side of the beam and to also limit commercial craft to a minimum altitude of 2,000 feet and a maximum altitude of 6,000 feet. The Navy would then confine its operation to the space either above or below when crossing these lanes. It is thought that if just the airlines were concerned, this would be all right and the difficulties could be ironed out. But the private flyers do not feel that they would have enough room for instruction and cross-country flights.

POPEYE SPINACH should have a prominent place in the diet of pilots. Col. Arnold D. Tuttle, medical director of the United Air Lines and former commandant of the army's school of aviation medicine at Randolph field, Texas, said recently at the convention of the American Association for the Advancement of Sciences at Indianapolis.

Lycoming Announces Hollow Steel Blades

Williamsport, Pa., Jan. 18—A new type electrically welded hollow steel propeller blade, which has been under development for nearly 18 months, was announced today by the Lycoming division of Aviation Manufacturing Corporation. Considerably stronger and more durable than blades now in common use, the new product also effects a weight saving of approximately 25%.

The blade is fabricated from a single piece of seamless chrome-nickel-molybdenum steel tubing by a new process. The hollow steel construction gives the new blade greater rigidity under torsional and bending loads encountered particularly in large propellers. Due to its extremely hard surface, abrasion from rain, spray and cinders is practically eliminated, the makers claim.

The first sizes to go into production will be for military and transport planes, L. B. Manning, president of Aviation, said.

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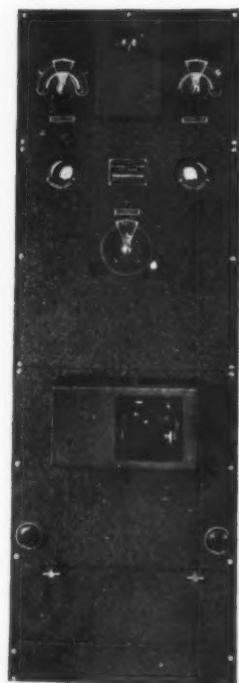
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FORTNIGHTLY REVIEW

(Continued from page one)

program satisfactory to the United States without having a lot of plain non-aviation public sitting in and doing most of the talking.

How many aviation leaders paid what part of the bills for constructing the airports at Sacramento and Oklahoma and a hundred and one other cities? How many aviation leaders paid what part of the total traffic receipts of scheduled airlines during the past year? How many aviation leaders of today are going to buy what part of tomorrow's production of private airplanes? How many aviation leaders are going to furnish what part of the influence necessary to get legislation that will permit aviation to expand through encouragement of private flying through provisions for more scheduled local service on airlines?

Who are the fellows who work year in and year out to improve local airports, who sit on the doorsteps of the Post Office Department seeking a new air mail stop for their community, who petition their Congressmen to aid aviation in one way or another, who stage air mail campaigns out of civic interest, who raise public and private funds for airport facilities? These are America's leaders of aviation and if the industry doesn't realize what these public spirited people have done, it should.

But back to the N. A. A. What has the N. A. A. been doing by way of national leadership for the millions of Americans who desire aviation's advance and who will buy the airplanes and ride the airlines? We invite letters on that question, because we want N. A. A. to take off the misleading rose colored glasses and look at its national self—make a fresh start and succeed nationally as well as many of its fine chapters have done locally.

Where to start? There are a hundred starting places. The President has just signed a bill providing increased mileage for scheduled airlines. But the budget estimates submitted to Congress carry no appropriation to pay for the carrying of mail, passengers and express into the hundreds of towns and cities that have been clamoring for this expansion. Why shouldn't the national office of N. A. A. police that sort of thing in the public interest? Why shouldn't the N. A. A. be a watchdog to be on the lookout for just such a challenge as this one. New mail routes mean more airlines, more airplane purchases, more pilots, more traffic men—and a wider aviation public. If we are wrong in believing that this is a proper function of N. A. A., then write and tell us your ideas.

We have only good words to speak for those who are attempting to provide a real and genuine program for N. A. A. and who felt that some progress was made in that direction at Cleveland. Our complaint was the advertising of a *First National Aviation Planning Conference* that had no planning, no direction and no knowledge of aviation's basic and vital problems as they affect the public. If the N. A. A. wanted to clean house, it should have held a convention without trying to make it any more than that. If N. A. A. wants to co-ordinate all aeronautical organizations into one national clearing house, that may or may not be commendable. Certainly that much is a side-show. But if aviation wants its own interests advanced and fostered, let it turn to the aviation public—which is much greater in scope than politically-ambitious hangers-on and small exclusive groups talking to themselves.

P. S. We are still scratching our head in an effort to fathom a remark made by Fowler "Sam" Barker (secretary of the Air Transport Association who presided at the transport section of the conference) who said, "this is a planning conference to end all planning conferences."

That's something for both the public and the National Aeronautic Association to think over in many ways. Maybe Fowler will be good enough to explain that crack. Was he talking for the A. T. A. or the N. A. A. or what? Aviation always has to go to the public for help. Somehow we still think the public would like a look-see into this business. It wants to help. Why not let it?

Master of the Seductive Phrase

IT'S about time some one recognized (in print) the extraordinary press relations of Bill Van Dusen, Pan American's sagacious and shrewd maestro. The weekly news letter which begins with "Dear Senor" and ends with "Salud!" is without an equal anywhere and is just as apt to come to newspaper aviation editors from Asuncion, Paraguay, as from Juneau, Alaska. If for nothing else, Van Dusen deserves a few plaudits for providing news editors with flight covers and in giving them a personal sense of amazement at the smallness of the globe when measured in terms of the airplane. As for the news letters themselves, they are honeyed to an extreme, replete with underlined words, exclamation points and a certain smugness which is so well done that sometimes it's actually irritating. Only a master of press relations could get by with the style. Oftentimes we have wanted to throw those letters in the wastebasket because they were "just too damn good" but we have resigned ourselves to reading them quietly and admitting that while they are smooth as silk and patronizing as—well, anyway, they *do* have something on the ball and if we don't cut this short with a simple gestured compliment to Van Dusen, we'll be trying to imitate his style, and that would be disgustingly tragic!

The Cooperative Urge in 1938

A NEW spirit of cooperation is afoot among the manufacturers of private-owner airplanes and this can be duly recorded as among the more healthy signs of the industry. One manufacturer wrote us the other day, evidently to get some of this optimism off his chest. He makes one of the lower-priced planes.

"Many manufacturers from 1935 up to the present time in an effort to 'get the business' became greedy enough to resort to distasteful tactics," he wrote, "which resulted in a feeling of distrust of each other, and which likewise was beginning to create disrespect for the industry on the part of the general public."

"In spite of these things, much progress was made during 1937, and with new companies coming into being, bringing stimulating competition and now in 1938 we are going to see aviation transformed from a 'stunted business' into a growing industry."

"We are going to see in 1938 the banding together of all manufacturers in the general promotion of aviation, from which each will receive increased mutual benefits. As if each manufacturer had made it a New Year's resolution, we will see reconstructed policies, respecting rights of each manufacturer one for the other, the abandonment of unbusiness-like and unethical tactics, and the placing of aviation on a completely legitimate basis throughout."

"In other words, we are cutting out the influence that has mistreated our industry, and we are burying the hatchet to make this unhealthy experience a thing of the past. We look forward to 1938 with optimism, based on the things we have outlined, and the sincere hope that at the end of the year we may look back upon this period as being the year in which aviation 'became an industry.'"

A new day is born indeed when manufacturers begin talking like this. Every industry goes through its cut-throat period. Aviation has had its share. We hope this period is over. We hope 1938 will bear fruit, as this manufacturer said, to make 1938 a turning point toward a stabilized industry by which all manufacturers cooperate for the common good of the business.

What Others Say

From editorial, "Laundering in Public" from Advertising Age:

Now the aviation industry, heretofore intent upon padding its collective crew in competition with other forms of transportation, has developed an internal feud, revolving around the best route to take in flying over the Western mountain ranges . . . It makes good copy for the advertising press, and good conversation for those newspaper readers who have managed to tie the advertising of these two air giants together. But does such a public name-calling contest benefit either of the contestants? We have our doubts.

Making capital of a competitor's difficulties is undoubtedly a very pleasant diversion, and frequently, as in this instance, has the desired effect of making him quiver with rage, but it seldom adds much volume to the music of the cash register. Back-biting advertising is particularly out of place in the air transport field, where the primary problem now, and for a long time to come, is not how to get business away from other airlines, but how to induce more travel on all airlines, and particularly a greater sense of security in this mode of transportation.

Ed Musick, No. 1 U. S. Pilot, Held 25-Year Perfect Record

Was America's True Ocean Transport Pilot, Pioneer of Many Significant and Historic Events in Aviation,
a National Loss

He will be sorely missed.

Captain Edwin C. Musick was America's No. 1 aviator. The supreme authority on ocean flying—who never stunted in his life—held a perfect record of 25 years of flying almost 2,000,000 miles. Neither he nor anyone with him was ever injured. At one time he held more world records than any other pilot, setting 10 in one flight. He was the first to pilot a transport craft across the Pacific. He was one of only three men ever to receive the Harmon trophy.

Born in St. Louis in 1894, Musick learned to fly in a California flying school in 1913, and remained in private and commercial flying until 1917, when he joined the United States Army Air Corps at San Diego as civilian instructor. He continued in that position with assignments at bases near Wichita Falls, Tex., and Miami.

In 1920 he flew the first plane for Aeromarine Airways, Inc., said to be the first commercial air transportation company in the country, which at that time was capitalizing on research gained by the trans-Atlantic flight of the Navy NC-4. Aeromarine operated between New York and Atlantic City in summer, and between Miami, Bimini and Nassau, Bahamas, during winter. He served also on Mitten Air Transport between Washington and Philadelphia, and opened the first passenger service between Cleveland and Detroit, using flying boats.

His first assignment with Pan American Airways was to pilot the first American tri-motor ever to go on an American commercial line, across the 90 mile airway between Key West and Havana, "laboratory route" from which has expanded the 32,500 mile network of Pan American, largest air transport unit in the world. As the company expanded, Musick was promoted. In 1930 he became chief pilot of the Caribbean division, covering the West Indies and extending as far south as Brazil. Before being transferred to the Pacific, he had covered practically every country south of the U. S.

Assigned to pioneer flights of the air mail service through this area, he served as co-pilot with Col. Charles A. Lindbergh, Pan Am's technical adviser, on several new flights between North and South America.

In 1934, when in charge of acceptance tests of the first of the Sikorsky Clippers, Musick piloted the four engined, 19-ton airliner to 10 new world records on a routine test flight of 1,250 miles non-stop, on which all world marks for speed and load for various distances up to 2,000 kilometers, were shattered. Further records followed on the same ship. Musick piloted it on its maiden flight to Rio de Janeiro and Buenos Aires and returned to the U. S. in five days, clipping two full days from the best previous flight time between North America and Rio.

During the long series of training flight schedules of the Clippers, Musick was in direct charge of all flight personnel and long operating technique.

In 1935, Musick was chosen chief pilot to fly the Clippers between San Francisco and Manila. After the first flight across the Pacific, Musick was selected to operate the first regular air mail-passenger service to Manila on November 22, 1935. At the same time he was training crews aboard these ships in navigation and radio work. He established the record of 14 hours 10 minutes flying time between Alameda and Honolulu.

He was awarded the Harmon trophy in 1936, as the world's outstanding aviator, in recognition of his pioneer commercial flight from Hawaii to the Philippines. Only Colonel Lindbergh and Wiley Post have been selected for similar distinction.

Musick next began surveying the Hawaii-New Zealand airway. His flight from Honolulu south in March, 1937, made history. His was the first plane to land at Kingman Reef, and the largest plane ever to fly to New Zealand.

Captain Musick set out on his last flight to New Zealand five years after Pan American started on January 9, 1933, to lay groundwork for the south Pacific-New Zealand-Australasia service.

Musick was conservative, methodical, exact, and turned in to his office comprehensive, detailed reports and opinions on every pioneering flight he made.

"Ed Musick was one of the great personal forces in aviation," W. I. Van Dusen, public relations director of Pan American, said. "He symbolized not only the pioneering era through which aviation has advanced during these ten years but the changing character of the flyer's profession itself. Uncle Ed was in every respect a master of ocean transport. With a foundation of practical judgment built up through 25 years of flying he had, through the past eight years particularly, applied himself to the mastery of the many technical and academic elements required of the men who captain international and transoceanic aircraft of today."

"He was a sturdy pillar for those younger flight officers who are only now struggling on the first rungs of that long ladder, and an unflinching example of conservative judgment, endowed with the greatest of all courage—the courage to turn back."

"That his untimely end has come just as the great era of pioneering is closing—an era which he, himself, did so much to distinguish—is particularly hard. His life's work, and that of the gallant crew who went with him, will serve as an inspiration for many years to come."

Van Dusen reveals that once, when Pacific experimental flying was getting under way, he asked "Uncle Ed" just what he would do if he ever got into a tight corner. The reply:

"Oh, I'd just say: 'Carry on, men.'"

He is survived by his widow, who has alternately lived in California, New York, and again in California, depending upon where her husband made his operating base.

"Those who knew him," wrote Violet Haven in the *Washington Post*, "feel that he departed from this life as he would have wished—master of his own ship in the air."

Folks Worth Meeting

THE word "dynamic" is often carelessly used in the spirit of generosity when personalities of men are discussed.



But once in awhile an executive can be called dynamic—and Don P. Smith, vice-president and general manager of the Vultee Aircraft Company, is a case in point.

With 25 years in the automobile industry behind him, Smith leaped into aviation in 1931. Essentially, he is a fast-working merchandiser. Aviation has profited by his change in occupations. Under his leadership, Vultee, as a division of Aviation Manufacturing Corporation, has grown from a small organization employing thirty persons to the present concern occupying 125,000 square feet of factory space and employing 1,200 workers.

Smith is duly proud of his company's growth. Today it has a backlog of approximately \$6,000,000 and is working two eight-hour shifts turning out a military long-range attack bomber type for various foreign governments.

KINSEY N. MERRITT, who has been general sales manager and director of advertising activities of Rail-



way Express Agency, Inc., since October, 1936, with headquarters in New York, began his career as a clerk in the Baltimore express office in 1908. After filling other positions with the company in the same territory, he became chief clerk of the Atlantic City office in November, 1915, and later correspondent and route agent at Philadelphia and Camden.

Long interested in traffic development, Merritt entered that phase of the express business when he was appointed traffic agent for the Allegheny department in March, 1930. In 1932 he was called to the traffic department in New York as assistant traffic manager. In October, 1935, he was transferred to the department of public relations as assistant general manager. He is a member of the Sales Executive Club and the Traffic Club in New York City, and is well known as a public speaker. As general sales manager, he has no little to do with Railway Express' lusty and growing little brother, Air Express.

Aeronautical Bookshelf

All books listed may be purchased through American Aviation

BEYOND HORIZONS, the autobiography of Lieutenant-Commander Lincoln Ellsworth, U. S. N. R. 363 pages. \$3.50 Doubleday, Doran & Company, New York.

The life story of Lieut. Commander Ellsworth reads more like fiction than fact. It is the story of a frail boy, born and reared in luxury, who chose a life of adventure in the Arctic and Antarctic regions.

His experiences in these regions are described in a very readable manner following an account of his earlier life. The book contains quotations from Rudyard Kipling's works. One of these which says "Who has trodden stars seeks peace no more," describes, to some extent, his life, Ellsworth says.

The book contains several excellent photographs illustrating conditions in the Arctic and Antarctic and also has a map showing Ellsworth's flight which bridged Antarctica for the first time.

THE GREAT ADVENTURE, by Edwin C. Parsons. 335 pages. \$2.75. Doubleday, Doran & Company, New York.

This story deals with the American members of the Lafayette Escadrille and is written by one who was a member of that war-time flying squadron. The book is profusely illustrated with photographs taken by Robert Soubiran, also a member of the Escadrille. The Great Adventure has been serialized under the title *Flight Into Hell*.

Parsons covers the activities of the American members of the Escadrille from the time the squadron was organized on April 16, 1916 until these men were transferred on Feb. 18, 1918. The book is written in such a way as to take the reader on flights with the

squadron. It has a historic significance in that it reveals an important phase of America's participation in the World War.

FLYING FOR 1938, Fifth Annual Edition, By Howard Mingos, Published by the Aeronautical Chamber of Commerce. 170 half-tone pictures, 70 drawings. \$1.50.

Although the review of this useful little book comes late, it may be read by those who have overlooked this year's edition. *Flying for 1938* is a prelude, of course, to the Aeronautical Chamber's *Aircraft Yearbook* and is intended primarily for the younger elements. Howard Mingos has, as in previous years, succeeded in dramatizing the year's outstanding aviation events in commendable fashion. It is, indeed, a beginner's introduction to aviation, covering military, commercial and sport flying with an authenticity of which the industry should be proud. Many books for youth are written on aviation, but few of them have the factual accuracy which this Chamber book has. The seventy drawings of airplanes should fascinate any aviation-minded youngster, but the volume is by no means limited in appeal to those under eighteen. The eleven chapters range from adventures, the Army, the Navy, the Coast Guard and the airlines, to private flying, aerial service operations, airways and airports, and training and education. It is, in short, a miniature edition of the yearbook made interesting for the boy—and girl—who wants to get into the business one way or another. Mingos is to be congratulated for having clicked for the fifth successive year with a book that should be in every library and every home.

Who Threw That Brickbat? \$!-&%★!

Reg Waters Calls Editorial on "Air Race Murders" Moronic and Vitriolic, Defending Miami; Lightplane Executive Blasts Forth on Races, Blaming Management

STRONGLY condemning AMERICAN AVIATION'S Dec. 15 editorial on "Air Race Murders" which criticized needless air race deaths, but not denying that the management of the 10th Annual Miami Air Maneuvers permitted admittedly "unairworthy" planes to race, Reg V. Waters, prominent aviation enthusiast and president of the maneuvers, has written this magazine in protest against the editorial and in defense of the race management.

Meantime Carl Wootten, sales manager of the Taylor-Young Airplane Company, Alliance, O., one of the sponsors of lightplane convoys to Miami at the time of the races, has leveled a blast against the Miami race management and against air races in general. Wootten not only criticized the exaggerated play of the Miami crashes in the newspapers but said everyone's efforts to make an impressive showing of the benefits of air transportation were greatly overshadowed by the crashes.

Rudy Kling, trophy winner and Frank Haines were killed within a few seconds of each other at the Miami races early in December. AMERICAN AVIATION editorially condemned the management for permitting races with wind conditions as they were and because unfortunate race crashes of this sort cause much harm to the cause of commercial air transportation.

Calls Editorial Vitriolic

Mr. Waters was formerly on the payroll of the City of Miami as aviation adviser and has long been prominent in civic aviation circles, particularly in the promotion of air bases, airports and races in Miami. His letter follows:

January 3, 1938.

To the Editor:

I am just in receipt of a copy of AMERICAN AVIATION of December 15 on the front page of which appears an editorial entitled "Air Race Murders." I do not know whether you wrote that editorial or whether it was contributed; but regardless of the source, it is very definite indictment of the editorial integrity of your magazine. I don't see how you can now read that effusion in retrospect without a sense of shame for the malice which it exhibits and the injustice apparently sought to be done to those very fine and high-grade men of the Contest Committee who worked out and directed the program of aeronautical events of the Tenth Annual Miami All American Air Maneuvers.

The article, because of its vitriol, inconsistency, unsoundness and obvious intention to do injury will do your magazine no good, and will actually do more harm to aviation than did the unfortunate accidents in question.

"Moronic Blast"

Your moronic blast states that "the management wants to satisfy the lust for excitement of the cash customers." That is a vicious lie, and is so proven by the record of the Miami Races. The management of the Miami All American Air Maneuvers have always emphasized safety and insisted that all participants both civilian and military carefully observe all safety regulations and avoid all risks beyond the normal risk of flying.

The editorial further condemns the management because the two planes in question were permitted to fly that

particular day and alleges that "the management knew full well that flying conditions were dangerous, but they sent the pilots out just the same." What were the flying conditions? In just what respect were they dangerous? That statement is also just another lie born of either malice or ignorance, or a combination of both. In the first place, no racers are "sent out." They all enter voluntarily and have the right and option to withdraw at any time.

Admits Planes Unairworthy

Furthermore the fact that all the other participants in that race went through without difficulty, and that all the other intricate events of the afternoon's highly colorful program both before and after those crashes, were performed without weather interference, disproves that canard. Only those two unlicensed, unairworthy aircraft got into trouble. I saw the takeoff; and those planes were having trouble as they passed northward in front of the grandstand. Marine officers and others standing by stated then that one of the ships had "tail flutter," that neither of those two planes was performing properly. Read the comments of *Canadian Aviation* magazine which substantiate these statements. The trouble was obviously mechanical or structural; and the pilots' own judgment should have dictated that they withdraw from the race. Here over-zeal to win that particular event doubtless played the final and fatal card.

You further attempt to condemn the management of the Miami Air Races for air race customs and practices that were developed by air races themselves—practices that are as old as air racing—such as race-horse starts, vertical banks around pylons, low flying on race courses, scatter pylons, etc. And as for the public address chatter which you ridicule, even your "unthinking people" will accept that for just what it is—merely amusing chatter. Too bad it affected you as it did.

You yourself know that the pilots who were killed (and whose death every man connected with the Air Maneuvers deeply and sincerely regrets) were flying special race ships,

designed especially for speed with many customary safety factors omitted. Neither of these airplanes could obtain Department of Commerce license. They could be flown only by securing special waiver for the occasion from the Department of Commerce.

Confesses Inexperience

These high-speed flyers came to Miami of their own accord with the avowed purpose of settling a rivalry which developed in the National Air Races at Cleveland last September. Each of the three was anxious to race and determined to win. I am authoritatively informed that neither of the two who were killed had piloted his racing plane more than six hours during the past year and therefore could not possibly have been properly skilled in its operation. They did not fly their planes to Miami, but hauled them here. It is believed by those acquainted with the facts that the combination of inadequate preparation, over-zeal, and structural or mechanical failure formed the background of the casualty.

The writer of the "editorial," in which hot-headed denunciation of the Miami Air Maneuvers is freely and recklessly indulged in, wails loudly over the harm those crashes will do to aviation among "unthinking people"; but he seems to have completely ignored the significance of the magnificent nine-year record of the Air Maneuvers, unmatched by any other air meet in the world—nine consecutive years without a fatality in any contest.

Your writer seems to have lost all sense of proportion in attempting to magnify the harm done to aviation by the crashes in question. Even the "unthinking people" whom he calls up to sit in judgment on the event will realize that deaths caused by freak aircraft do not carry the condemnation of aviation, nor do they generate fear of flying, as do successive crashes of airliners in which large numbers of air travelers are killed—and these licensed airliners flown by highly trained pilots of long experience and great skill, equipped with and aided by every known device created to insure se-

curity in take-off, flight and landing. Would the writer of that editorial advocate abolition of air travel because an air transport plane crashes killing a cargo of passengers—men, women and children? Would he brand the airline managers as "murderers?" Certainly he should not! Yet how many airliners crashed and how many air travelers were killed in the year 1937? How many airliners have crashed and how many passengers have been killed since the Miami All American Air Maneuvers were inaugurated ten years ago? Match those figures against Miami's remarkable record, and get right on your reasoning.

We "Catalog" Ourselves

In classifying as murderers that group of excellent Florida citizens and estimable gentlemen from other states, both governmental and civilian, who have for ten years worked intelligently, unselfishly, and loyally in planning and conducting this great annual air meet which is held in such high esteem throughout the aviation fraternity, you do them only passing injury, but you have permanently classified and catalogued yourself.

You burned your pants in that editorial, and I suggest that for the best interest of your magazine and its standing in the aviation world, you write a clarifying editorial in your next issue that will indicate that you are actually possessed of common sense and a sense of common justice and decency.

And (to adopt the style of the last paragraph of the editorial) let us have an end to assinine editorials. Let's discontinue the practice which you would seek to establish of magnifying in editorials and news columns the possible damage to aviation by crashes of freak aircraft. Why scare the public to death with such putrid piffle? Honest analysis and comparison, yes! Constructive, dignified, gentlemanly advice and suggestions, certainly! But so long as mentally deficient, journalistically dishonest, calamity howling news-hawks and editorial writers distort the facts and magnify the possibilities of harm of such unfortunate accidents just so long will the public—both the thinking and the unthinking—entertain doubts about the safety of flying, with the regrettable yet inevitable effect on the general public mind."

Reginald V. Waters.
President, Miami All
American Air Maneuvers.

Wootten Blasts Races

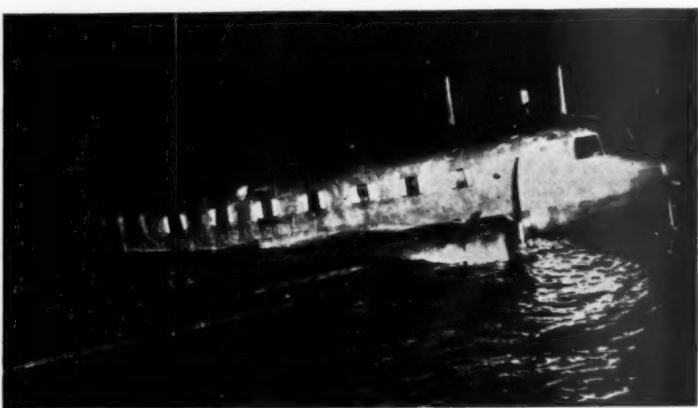
Mr. Wootten, in his letter to AMERICAN AVIATION commenting on the Miami races, said:

"The concentration of so many airplanes in Miami certainly opened the eyes of the general public and other branches of aviation to the progress made by the light airplane. This was probably the greatest single step forward in the entire history of aviation, especially in the light plane category.

"Though a great deal was accomplished by the impressive representation of airplanes in this event, we feel that everyone's efforts, to a great extent, were over-shadowed by the unfortunate accident which occurred during the opening day of the races.

"Literally hundreds of pilots and passengers flew from practically every corner of the United States, in all kinds of airplanes, in good weather and

What a Douglas Looks Like While Swimming



Skillful handling of this Douglas DC-2 Army Air Corps transport prevented fatalities and serious plane damage when it was forced down in San Francisco Bay Jan. 6. The crew of five were saved. Gasoline was quickly discharged and an SOS sent out on the radio before coming down on the water. The ship remained afloat, being towed to Alameda Seaplane Base by a Coast Guard vessel.—Wide World Photo.

bad weather, proving that not only the airlines but the light craft as well, are a practical and safe means of transportation.

"In the grandstands were thousands of people who were favorably impressed by the showing of aircraft and who might have been converted into aviation enthusiasts. In a split second these thousands of people were transformed into aviation 'back-sliders.' All the good gained by the marvelous representation is quite insignificant when compared to the two lives that were needlessly sacrificed that day.

"To the ones who are conscientiously striving to instill faith and confidence into the general public, such things are very discouraging, and definitely present an obstacle which greatly retards our progress as an industry.

"Now, as a *grand finale*, the Miami newspapers came out with the absurd headlines in box-car letters, 'Airpocket Blamed for Death of Pilots,' demonstrating the perfect manner in which to sell aviation to the 'grave diggers.' I do not think the newspapers could have found a more fitting expression that would have so completely blasted to smithereens the air-mindedness and faith in aviation of the general public.

Blames Management

"After reading such headlines, can we blame any mother for begging her son *not* to take up flying; can we blame any wife for pleading with her husband *not* to ride the airlines, because the plane might hit an airpocket! The general public does not know that there is no such thing as an airpocket, technically, and the term itself has gradually become obsolete. However, it has now been revived and we will have to try again to undo the damage that this 'ghost' phrase has done.

"This outrageous article which appeared in the Miami papers and was picked up by other papers throughout the country, immediately carried us back to your speech on 'Aviation Publicity' delivered at the Aviation Planning Conference at Sacramento, Calif., last September, in which you so openly placed the responsibility for such derogatory publicity directly on the shoulders of the 'people in aviation,' where it justly belongs.

"In the Miami case the race officials apparently made no effort to inform properly the local newspapers of the exact cause of the accident but seemingly were perfectly willing that the newspapers print anything they cared to, regardless of its effect on aviation. Surely they knew the cause of the accident. *Why didn't they make it clear to the public through the newspapers?*

"In my opinion, there was not enough attention given to details and too much attention given to matters of lesser importance by the management. Had this been done, possibly this horrible event might have been averted.

"Aviation will progress through scientific study, research and careful planning and *not* by such adverse newspaper articles as aviation received following the unfortunate incident in Miami.

"Are speed races beneficial to aviation? If man eventually reaches a speed of 500 miles per hour, and it cannot be attained with safety—then we have gained absolutely nothing. In the Miami case the devastating effect certainly over-balanced any possible benefits. Aren't we handicapped enough already, without having to overcome these obstacles year after year? Must lives be needlessly sacrificed?"

SAN FRANCISCO, Jan. 15—L. B. Daniels, prominent aviation insurance man on the West Coast, has been elected chairman of the aviation committee of the S. F. Chamber of Commerce, succeeding Emory Bronte.

Pro, Con and Otherwise

Note: Anonymous contributions are published only when the identity of the author is known to the editor.

Who Is Jupiter?

Jan. 7, 1938.

To the Editor:

In regards to the Pro, Con and Otherwise letter written by my friend Jupiter (whoever he may be) in your Jan. 1 issue, allow me to say AMEN as he voices my opinion (although I probably would not have used such mild terms and would have inserted a large percentage of profanity) and the opinion of over 50% of the conscientious individuals attending the NASAO convention in Miami.

This could be checked very definitely by the numbers in the meetings after the first day.

It is too bad that all of those waiting in line for the said Bureau job can't get it. But until the appointment is made I hope J. Monroe Johnson can stand up under the affection administered to him.

Aviation needs more people like Jupiter that are not afraid of their convictions. The statements he made are reasonable and true. He should have signed them as the only way to break up the practice is for those believing in the truth coming out in the open.

Al Near, Supt.,
Bowman Field,
Louisville, Ky.

(Editor's Note—Jupiter has been asked if he will not disclose his identity. All we can say is that he is a bona fide state aviation official. How about it Jup?)

Collect Wires!

Jan. 13, 1938.

To the Editor:

Flash!

A man prominent in commercial aviation circles just received a long COLLECT telegram from a person at the Cleveland Planning Conference.

The sender of the collect telegram requests the recipient to wire immediately the N. A. A. endorsing the sender for a high aviation position.

Now laugh! It is a study in ultra-egoism.

Jupiter

Batting One to Hanks

Jan. 20, 1938.

To the Editor:

It requires a counter-propagandist to offset the harmful influence of Stedman Shumway Hanks "highway flight strip" hallucination. Right at the time when there is a dearth of adequate all-way landing fields, and a dearth of cash to correct the situation, he is befuddling the minds of state officials with the flight-strip hooey.

Flight strips may have an indeterminate merit. In regions where there is a scarcity of natural landing terrain, and any construction is expensive, they may solve a problem. But, in areas of good flying terrain, the idea is far-fetched.

To give attention to a program of flight-strip construction, now, is like spending the money that will provide the whole cloak for ermine trimmings to make it "beautiful."

It is illogical and unfair for Hanks to advance the idea that flight-strips can replace the all-way airport, or landing field. At their best they can provide a two-way landing area only. It takes four of them to equal one all-way field in adequacy and practicability. In areas, where 25 to 40 m. p. h. winds are common, the search for the flight-strip to

suit the occasion would be fun. At a construction cost range of \$24,000 to \$70,000 it is hard to imagine a prevalence of flight-strips that would permit the selection of the suitable one, on a given day, at the convenient place. Yet, Hanks dreams of scheduled mail operations from strips, with highway mail trucks handling mail transfers, on schedule. Why? You guess.

It is wiser to construct the house before the landscaping is done.

Jupiter.

Add Honor List 1937

Jan. 10, 1938.

To the Editor:

I notice in your Jan. 1 issue that you have started an annual honor roll of outstanding men in aviation. I can't overlook the opportunity to give a boost to our aviation committee chairman, Harold G. Jones. You have given considerable publicity in your magazine, and rightly so, to the aviation planning councils. We started the idea here in Spokane a year ago last May. Harold Jones, chairman of our committee, sponsored the idea and was the guiding light behind the entire meeting. From that gathering other sectional meetings have resulted and the whole thing goes back to Mr. Jones who was responsible for the success of the original conference.

Kennard Jones, Secretary
Aviation Committee
Spokane Chamber of Commerce
Spokane, Wash.

Clarification

Jan. 6, 1938.

To the Editor:

I was just reading your issue of January 1st. I note your story relative to my work for American Export Air Lines. There is nothing incorrect about the story as far as I am concerned, but I am afraid that the headline might give some of my friends a misleading impression of my status. Some of them seem to have taken it as indicating that I was a regular and permanent member of the American Export Air Lines' staff. That is not the case, as I have merely been retained as consultant for that company, as by various other companies from time to time, to make a study and report regarding certain technical and economic aspects of projected air-transport enterprises. My time is not, and has not for some time been, devoted entirely to the affairs of any one client.

Edward P. Warner.

Our Face Is Red

Jan. 12, 1938.

To the Editor:

Why is it that most American aviation magazines in this country never seem to be able to spell CROYDON correctly? After all, the airport has only been there 20 years and the town itself was founded in the 15th century. See page 5—AMERICAN AVIATION, January 1st.

P. E. Beusbea
U. S. Representative
Imperial Airways

Orchids

Jan. 10, 1938.

To the Editor:

I wish to thank you for the very complimentary manner in which my recent study of "The Aviation Industry" was handled in your Jan. 1 issue. I am deeply appreciative of your remarks particularly inasmuch as there is no question in my mind that AMERICAN AVIATION is the outstanding magazine in the field. I read it regularly from cover to cover and,

I believe I have already told you, it is one of my chief sources of information about the industry.

William Barclay Harding
Smith, Barney & Co.,
New York City

"Free" Transportation

Jan. 13, 1938.

To the Editor:

So—they work ungodly hours at a comparatively low wage rate for an industry whose future success depends, to a great extent, on their continued efforts, confidence and loyalty—their reward is "Pay for your transportation."

This should certainly go down in the history of commercial aviation as a "prize boner" and a supreme example of ungratefulness. The need for a solid organization of airline employees is now more apparent than ever.

Airline employees have long been irritated by their companies' issuing them lower class passes than non-employees, and it is just about the last straw when some one, who sells transportation as a side-line in their home town, is given preference over the employee when there is only one seat open on the plane.

Those not directly connected with an airline should pay something for a pass, and the practice of serving free dinners (costing the line 85¢ or more) in flight to non-revenue passengers (including employees) is an unwarranted expense. It is also only proper that all those traveling on passes should be charged for excess baggage above the allowed thirty-five pounds.

What can the airlines hope to gain by charging their employees for transportation . . . perhaps a small amount of revenue from an action that will breed nothing but contempt among the personnel.

Many reservation clerks, passenger agents, traffic solicitors, etc., drawing from \$80 to \$150 per month, anxiously look forward to a trip on the line during their vacation each year. Some considered these trips a sort of bonus from an industry that, at present, has little else to offer them.

Airline traffic agent

Likes Lizzie Zilch

January 15, 1938.

To the Editor:

Just a note to compliment you on the January 1 issue of AMERICAN AVIATION. I thought your fortnightly review was particularly timely and also was very interested in the article, "Lizzie Zilch vs. Good Publicity." You really are doing a bang-up job for the industry.

I was glad to see that you included Devon Francis in your "We Nominate for Fame" line-up. I think we all agree that he is doing a swell job for AP and for all branches of aviation.

Jim Griffin,
Publicity Director,
Lockheed Aircraft Corp.

Objects to Pushing

Jan. 4, 1938.

To the Editor:

Is aviation publicity really so bad? I know of certain cases where all the criticisms made in the "Lizzie Zilch" article (Jan. 1) apply, but I know that such cases are the minority.

It's certainly not news that airlines have barely scratched the surface. Nine years ago our own company carried 2,000 passengers and talked about just scratching the surface. Nine years from now we'll carry 2,000,000 or maybe a lot more, and we'll still be worrying about getting more business.

We don't like air races. We don't like like trans-oceanic flyers. We don't like smart guys stunting light planes. We
(Continued on next page)

MENASCO 50 HP MOTORS ON LINE

California Firm Enters Small Engine Field Anticipating Record Year For Light Plane Production

Los Angeles, Jan. 15—Production will begin immediately on a 50 h.p. four cylinder, horizontally opposed L head aircooled aircraft engine by the Menasco Manufacturing Company, Al Menasco, president, announces.

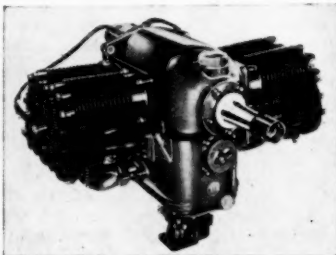
"The company's entrance into the low horsepower aircraft engine field was at the urgent request of manufacturers of light airplanes, the production of which is expected to set new volume records this year," Menasco asserted. "One thousand of the new M-50s will be turned out at once."

Displacement is 144.4 cubic inches with a bore and stroke of $3\frac{1}{2} \times 3\frac{3}{4}$. The engine develops 50 h.p. at sea level at 2550 rpm, and weighs less than 160 lbs., or about 3.2 lbs. per horsepower.

Features of the first engine, which was completed after more than a year of experimentation, include increased cooling as a result of more total fin area, enclosed valve mechanism and a square section manifold. The latter feature, Menasco said, will give a more efficient distribution of fuel to the cylinders.

A wet sump with a geared type oil pump is utilized with the crankcase fitted for increased oil cooling. Oil capacity is four quarts. A Stromberg up-draft carburetor with altitude control and a single Bendix Scintilla magneto are other features of the new engine.

Crankshaft is of the one piece, three throw type with two main bearings. Overall width is 27 5/16 inches. Compression ratio is 5.5 to 1.



View of the new 50 Horsepower, four cylinder horizontally opposed L head aircooled engine now in production by Menasco.

Airlines Carry Mail Free? Goodness No! But Mr. Howes Should Pay Newark a Visit

Why some Congressmen never find out the true facts about the air mail service came to light in the hearings of House Committee on Appropriations a few months ago when the committee was considering the Post Office Department budget for 1939.

Congressman J. Burrwood Daly, of Pennsylvania, asked the following question of William W. Howes, First Assistant Postmaster General:

"Am I correct in thinking that many of these airlines are carrying the mail for the Government and that a portion of them receive no compensation?"

And Mr. Howes replied:

"I think what you are referring to is the fact that we have pay trips for air mail, right through. We give the air-mail-trip number so and so with different companies. That is figured on a basis of poundage, scale, and so on. Then some of these companies have many more trips than they have mail trips. They have passenger trips, too.

BAC Begins Issuing New Air Regulations

The Bureau of Air Commerce has begun the distribution of Civil Air Regulations which went into effect Nov. 1, 1937. Copies may be had by writing to the Bureau, Department of Commerce, Washington, D. C.

The following are those which so far are off the press:

- 00.—Aircraft Registration Certificate
- 01.—Aircraft Certificates
- 02.—Aircraft Identification Mark
- 03.—Aircraft Title Transfer
- 04.—Airplane Airworthiness
- 13.—Aircraft Engine Airworthiness
- 14.—Aircraft Propeller Airworthiness
- 15.—Aircraft Equipment Airworthiness
- 18.—Repair and Alteration of Aircraft
- 20.—Pilot Rating
- 21.—Airline Pilot Rating
- 23.—Ground Instructor Rating
- 24.—Mechanic Rating
- 25.—Parachute Rigger Rating
- 26.—Airport Control Tower Operator Rating
- 27.—Airline Dispatcher Rating
- 40.—Scheduled Airline Certification (Interstate)
- 50.—Flying School Rating
- 52.—Aircraft Repair Station Rating
- 61.—Scheduled Airline Rules (Interstate)
- 90.—Air Mail
- 91.—Aircraft Accident Investigations
- 92.—Hearings Upon Certificates (Issued, Renewed, Denied, Suspended or Revoked)
- 93.—Evidence
- 94.—Penalties
- 95.—Imposition, Remission and Mitigation of Penalties
- 98.—Definitions
- 99.—Mode of Citation of Regulations

In addition the Bureau has released Air Commerce Manual No. 18 on "Repair and Alteration of Aircraft," which accompanies CAR 18 listed above. Copies of other regulations, including CAR 60 on air traffic rules, are expected to be released shortly.

Of all of the above regulations, those on ground instructor rating, airport control tower operator rating and airline dispatcher rating, are new. CAR 20 on pilot ratings has been discussed at length in aeronautical publications.

The "Handbook on Civil Air Regulations" published by AMERICAN AVIATION at \$1.00 a copy explains in simplified language CAR 20 and CAR 60, the latter not yet being available from the Bureau.

Bogs Down Safely

Newark, N. J.—After circling the airport during a rainstorm Pilot Usher Rousch put his American Airliner down in a marsh Jan. 7, without serious injury to five passengers, Stewardess Veronica Lalley, Co-pilot Stanley Gerding, or himself. Landing gear and fuselage were damaged.

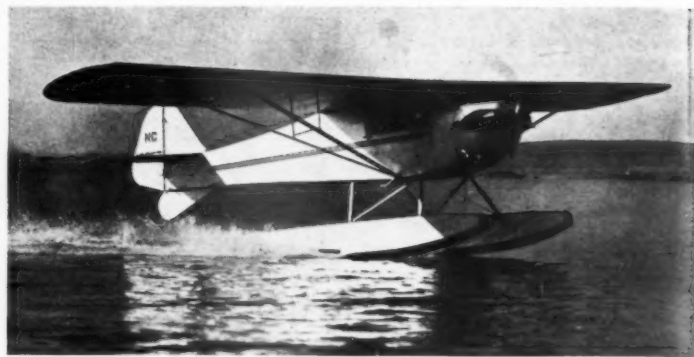
Now, some of them offer to carry mail as it comes in through the Railway Mail Service to the air field, on planes in regular passenger schedules, which are not mail pay trips. That moves the mail along faster, and the poundage that they carry on those trips is credited along with the poundage on the pay trips and paid for at that rate."

A fine explanation—but!

What Mr. Howes did not explain is that when the regular mail trips are up to their maximum limit allowed for pay, the additional mail and the so-called "credit trip" mail just remains on credit, and no pay is ever received. Many hundreds of planes have left major terminals loaded with hundreds of pounds of mail for which the airlines received no pay. How much, nobody knows, but it's plenty.

SALARY of the director of Air Commerce was recently raised from \$8,500 to \$9,000.

Taylorcraft for 1938



Following successful A. T. C. tests, Taylor-Young Airplane Company, Alliance, Ohio, announces production on its Taylorcraft Seaplane, which is identical to the company's Standard and DeLuxe models in design and structure. Flight tests are now being made on ships equipped with skis.

An extra door is available for each model, at additional cost, Carl Wooten, sales manager, reports. Shipments of the recently introduced DeLuxe models have been sent to Puerto Rico, Brazil, and England. Wooten says a policy of constant improvement rather than production of yearly models has been adopted by the firm.

WAE Ships Named "Vikings"

New all metal twin motor six-passenger Lockheed ships recently placed on Western Air Express' Salt Lake City-Great Falls division have been christened "Vikings," according to Alvin Adams, president of WAE, announcing result of a contest. The name was submitted by Cyril Jorgenson, Great Falls, who receives as prize round trip transportation from Great Falls to Los Angeles for two persons, and four days at a Los Angeles hotel. Contest judges were secretaries of five chambers of commerce. Flying time on the division has been reduced about 15% with inauguration of Viking schedules, Mr. Adams said.

PRO, CON AND OTHERWISE

(Continued from page 17)

don't release speed record stories. We "never heard" of a racing pilot in the cockpit of an airliner. We want to make air transportation seem as common as an old shoe and as unromantic as a charwoman.

Of the releases we have issued this year, more than 50 per cent have dealt with subjects pertaining directly or indirectly to technical advances intended to put across the idea of steadily increasing dependability. You can't convince someone that flying is safe in one story or one ad or one sales talk; you have to build him up to the point where finally he comes to the conclusion that it is safe—and thinks he arrived at that conclusion all by himself. And you have to use newspapers, magazines, radio, direct mail, personal solicitation, word-of-mouth (the best of 'em all) and all other channels in a cumulative drive that takes time. And that is a job, when a few people are trying to educate 130,000,000 that don't want to be educated.

It's a job that takes all your time. Staying in your office and working isn't a symptom of high-hattedness.

I was talking the other day with the express agent of another airline, and we agreed that the aviation publicity job boils down to precisely this: (1) Sell the public on air travel in general and (2) make your particular airline the best known so that when a first-flight comes along, he'll think of you first.

I didn't mean to get so wound up, but it seemed to me that aviation press agents were being shoved around unnecessarily. In particular, I resent the suggestion that we push a lot of pap out to the papers just to make a showing with our bosses.

If no airline had had an accident for the past two years, you and I both know that airplanes couldn't be built fast enough to handle the business. But accidents have happened, and will happen again (although steadily diminishing to the point where flying will eventually be the safest form of trans-

portation), so our work is cut out for us. And we have known for a long time that stories about stewardesses marrying pilots won't do the job for us (although honestly, I don't see where they hurt any).

I just wanted to get these remarks off my chest.

An airline publicity man

Beattie Reacts to Lizzie

January 7, 1938.

To the Editor:

What press agent wouldn't react to "Lizzie Zilch vs. Good Publicity?" Sounds like Devon Francis to us. I think we all ought to dramatize the scientific developments to a fine degree. However, what picture editor and city editor isn't interested in pix of pretty Lizzie Zilches and stories on Lizzie Zilches' marriages? After all, lineage is something.

We think the industry and Braniff Airways has a helluva good story coming up next week which is decidedly not of a Lizzie Zilch gender and you didn't even mention it in your aviation calendar! I refer, of course, to the semi-annual meeting of the aviation maintenance committee.

W. R. Bill Beattie,
Public Relations,
Braniff Airways.

(Editor's Note—Sorry about missing the calendar with that maintenance meeting but Lizzie Zilch showed up in our office and took up all our time).

Handbook Orchids

Jan. 17, 1938.

To the Editor:

We are in receipt of your Handbook of Civil Air Commerce Regulations which we recently ordered. We wish to compliment you on the way you have gotten up this book and feel that it serves a great need.

Tred Avon Flying Service, Inc.,
Malcolm L. Hathaway, Pres.,
Easton, Md.

AIRPORTS

EAST HAMPTON, L. I.—Bureau of Air Commerce approved improvement of local airport calling for expenditure of \$43,472 in federal funds and \$18,371 in city funds for clearing 47 acres, building 5,000 ft. of runways.

OKLAHOMA CITY—Specifications for the city's \$129,000 airport improvement project were signed Jan. 9 by the mayor and submitted to WPA for approval. City made asphalt would be used on a new 3,000 ft. runway. About 150 WPA workers were hired Jan. 15.

EDMONTON, Alberta—Bids were opened Jan. 14 for new \$35,000 municipal airport hangar Jan. 14, which is to be larger than the existing building. Concrete foundations already are in place.

NEW YORK, N. Y.—While a street car stood on a track on a promontory 200 feet high above the field, protecting interest of Brooklyn-Manhattan Transit lines, workers continued digging away the enlarged North Beach port. BMT officials said they were waiting for a city proposal relocating the tracks.

OPA-LOCKA, Fla.—A \$30,000 reserve in navy WPA funds was taken from the U. S. naval base "because no continuing project required its use." Lieut. Comdr. R. P. McConnell, commanding officer, had planned to divert about \$28,000 of the total toward costs of constructing new runways at the base, which is leased to the navy by the city at \$1 a year. "We need new runways, and if we do not get them we cannot continue to operate," McConnell said.

SACRAMENTO, Cal.—The new air depot here will be completed in about a year, officials said.

ORANGE, Cal.—County supervisors started an investigation into a request for extension of ten years to the present ten year lease granted to Floyd Wright but lately transferred to Roy Cheverton of Santa Ana. If the board will grant Cheverton the extension, he said, a \$50,000 manufacturing concern would be located here soon.

SAN DIEGO, Cal.—Clarence L. Prescott proposed to donate about 50 acres of landing area at Rancho Linda Vista sportsmen pilots airport, to the county, and suggested to board of supervisors that a WPA project be formed for improving the field.

SPOKANE, Wash.—City dads denied reports of a planned mile square "super-airport" and \$71,000 worth of runways, and denied their field is inadequate. Controversy arose with rumor that Northwest Airlines officials criticized the gravel field. Northwest disclaimed the charge. In the city council Northwest was censured for erecting a hangar with WPA labor at cost of about \$35,000 when the city had entered into an agreement on the understanding it was to be a \$14,000 project. Northwest was to furnish material and use the hangar rent free until the material cost was met, it was said.

INDIANAPOLIS—City officials delivered a revised contract to Washington agreeing to provide \$65,000 for a federal aeronautical experimental station at municipal airport, \$40,000 to be spent on a building and \$25,000 for runways. Labor cost would be borne by the U. S.

COLUMBIANA, Ala.—Reconditioning of runways, drainage improvement and tree clearing was scheduled to start here Jan. 10. Cost is \$2,706, with WPA furnishing \$2,356 and city \$350.

LAGRANDE, Ore.—An ordinance authorizing city to issue \$13,000 in 10-year general obligation bonds to finance purchase of a municipal airport, passed.

BREWTON, Ala.—Construction was to start Jan. 15 on a two-story brick club house on the local field. The WPA district office has requested WPA state office to release the project.

MONTGOMERY, Ala.—WPA released a project for Maxwell Field covering installation of sewer lines along the two new paved runways now building. WPA furnishing \$21,360; Maxwell Field, \$18,000.

BIRMINGHAM, Ala.—Base has been laid for the new 3,600 foot asphalt runway running n.e.-s.w. on Municipal Field. With removal of 106th Observation Squadron, Roberts Field will be maintained as an emergency port. One section of the hangar will also be left for emergency use.

MONTREY, Cal.—George A. Smith, local attorney and aviation enthusiast, resigned as temporary manager of Monterey Municipal airport. Criticism by Milus Gay, local newspaper publisher, of Smith's ability to act as manager is said to be cause of resignation. Del Monte Bo., owner of the airport property, Charles Ryan and A. Norton, local aviators, will probably manage the field.

MERCED, Cal.—Approval announced of a new project calling for grading, water systems and drainage installation, construction of airport fence, seeding and sodding, and construction of three paved aprons, at an estimated federal cost of \$12,367. Department of Commerce reported to local authorities.

JASPER, Ala.—The Department of Commerce approved continuation project for construction of a hangar and other work estimated at \$20,305 cost.

YAKIMA, Wash.—An administration building will be constructed at city port here within a few months. Tentative plans for lighting field soon to meet standards required for night operation by Northwest Airlines were completed. **SPOKANE, Wash.**—Bureau of Air Commerce officials requested by Senator Pope to investigate feasibility of building an airport on Rathdrum prairie in Spokane Valley. Contract for cables, transformers, and switches in connection with new lighting system has been let to Westinghouse for \$288. A new ornamental fence will be built costing \$1522.

POCATELLO, Idaho.—Bureau of Air Commerce approved complete construction of shops and a hangar at the southern branch of University of Idaho here for \$23,358.

HAUTER WITH CAL

Former TWA Employee Is Named General Operations Manager

Denver, Col., Jan. 24—O. R. (Ted) Hauter of Kansas City, who has been a pilot and flight dispatcher there for TWA for 3½ years, is to become general operations manager of Continental Air Lines. The appointment will become effective late this month.

Hauter, a native of St. Joseph, Mo., spent about four years here and at Colorado Springs flying for the Alexander Eaglerock Company and the old Colorado Air Lines. He flew with United Air Lines for about three years before joining TWA.

Continental's new operations manager learned to fly in 1920 at Arkansas City, Kansas. In addition to his post as operations manager, he also will be a member of Continental's board of directors.

Agent Named

Walla Walla, Wash., Jan. 14—James Leachman, airport manager, has been appointed Taylorcraft agent here by Kent Eichenberger, eastern Washington distributor.

JOHN B. MOLITOR, district traffic agent for TWA in San Francisco until Jan. 1, is now connected with the San Francisco Golden Gate 1939 Exposition.

Southeast and East Plan Air Conferences

Two regional aviation planning conferences have been tentatively scheduled for April and May. Asa Rountree, Jr., secretary of the Alabama Aviation Commission, has announced tentative plans for the southeastern conference to be held in Montgomery, Ala., the week of April 11. Definite dates will be made known later. Invitations will be extended to nine states, Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee.

A movement is now underway, led by Lt. Richard Aldworth, superintendent of Newark Airport, for an eastern conference which is tentatively scheduled to be held in Atlantic City sometime in May. Thirteen eastern states from Maine to Virginia, would be invited.

The Southwest conference is scheduled for March 11-12 in Oklahoma City, while the Northwest Planning Council is meeting at Vancouver, B.C., Feb. 11-12.

Action! Action! Field Exec Gives 'Em Some!

Los Angeles, Jan. 13—Dudley M. Steele, new manager of Union Air Terminal at Burbank, is a man of action, and without much doubt is going to make a hit with the Air Line Pilots Association.

The Jan. 1 issue of AMERICAN AVIATION published a list of hazards at airports which the pilot's association had submitted to the Bureau of Air Commerce with recommendations that the bureau take immediate steps to eliminate. Steele read in the list that Burbank has a large tree and a power line which the pilots deem hazardous. The day after Steele received the magazine, the tree was being uprooted and rapidly converted into firewood.

In addition, Steele arranged for a conference with authorities in regard to the high tension power line along the east side of the field and the pole line on the south.

"You can say for me," said Steele waving a copy of AMERICAN AVIATION, "that if there are any obstructions around this field they will be removed if humanly possible. I am on my way, right now, to line up some help on that power line removal job and I don't mean perhaps." With that he slammed the door of his car and drove away in the direction of Los Angeles.

SAFETY

LOS ANGELES—Louis Quiggle, 41, pilot, and passenger killed when small plane crashed here Jan. 9.

BOSTON—Engene Garbarino, 25, Maiden student pilot, killed at airport when plane crashed from 150 feet after take-off Jan. 9.

BARSTOW, Cal.—Second Lieut. Charles Clancy, 25, of Riverside, Pvt. Victor Jost, mechanic of Inglewood, killed when army plane hit a power line, crashed and burned Jan. 4.

EDGEWATER, N. J.—James Burke, pilot, Mineola, L. I., and Richard Brown, Manhattan, owner of plane, rescued unhurt after crashing into Hudson river Jan. 8.

HONOLULU—Lieut. Paul D. Bunker, Jr., 28, army air corps, killed when bomb-laden pursuit plane crashed into mountains near Schofield barracks. A bomb burst during its release, belief. Jan. 7.

KANSAS CITY, KAN.—Pilot Capt. Benjamin Southworth, naval reserve, and an observer, bailed out before plane crashed into a house Jan. 8.

GRANDVIEW, TEX.—Lieut. Frank Thompson, Columbus, O., pilot, and W. T. Mathews, non com officer, killed when army plane from Barksdale field dropped into heavy timber near city Jan. 10.

RICHMOND, Cal.—Rescued by boats after their army C-33 was forced down on San Francisco bay were Col. Davenport Johnson, commandant of Hamilton field, Lieut. Col. Calvin E. Giffin, Lieut. A. L. Moore, Sgt. Parker and Pvt. McCallum. Jan. 4.

SAN PEDRO, CAL.—Three hundred Navy planes failed to find a Navy PBV-1 which disappeared Jan. 5 in the Pacific between Santa Barbara and San Diego. Crew of seven aboard: Lieut. Truman Carpenter, Philip Browning, Edgar Anglin, G. A. Mills, C. C. Creech, William Erbe, Joe Adair.

Picune Cleared

Hackensack, N. J., Jan. 18—William Picune, North Bergen, N. J., aviator and stunt flyer, was cleared of a charge of causing death by airplane when Assistant Prosecutor Sydney Sher recommended that the charge be dropped. Picune was piloting a plane with three passengers over Bendix Airport Dec. 12 when his plane collided with another, killing the other pilot, John Diskon.

'DISROBING SHIPS' FOR ARGENTINE

North American Selling 33 Fabric-
Detachable Planes to South
Americans

Inglewood, Calif., Jan. 13—Sale to the Argentine government of 33 general purpose "X-ray" training ships by North American Aviation Company here has been announced by the Los Angeles Chamber of Commerce. Each ship will be constructed so that its entire fuselage covering can be removed, the result being to reveal the skeleton, as in an X-ray shot.

The planes (NA-16-1P) are designed to simplify operation and reduce maintenance costs. All parts are built in precise jigs, so that each is identical with its predecessor. As a result, no need for alignment or reshaping hinders assembly, and the sections can be bolted together with almost the simplicity of attaching the spare wheel on an automobile, the makers assert.

The ships are being shipped in crates to the Argentine while the motors will be sent separately from the east coast.

The "disrobing" feature of the Argentine trainers and the BT-9-B consists of completely removable side panels extending the entire length of the fuselage from cowling to tail. Held by Zeiss fasteners, these panels may be removed on the field for inspection of the entire molybdenum tube framework of the fuselage, or for a check of controls, radio installation, or military equipment. A complete power plant change may be made in 40 minutes.

Experience has resulted in a record for low maintenance, it is held.

The supercharged Whirlwind makes available 450hp for takeoff and 420hp for continuous sea level operation. At 13,500 feet the ships have a rated speed of 166mph. Cantilever metal wings are provided with flaps which reduce landing speed to 57mph.

North American plans installation of \$100,000 equipment during 1938.

U. A. L. Traffic Head Shuffles Personnel

Harold Crary, UAL vice president in charge of traffic and advertising, announced the following changes in personnel Jan. 12:

M. P. Bickley, district traffic manager at Philadelphia, becomes assistant district traffic manager at New York.

D. E. Dean, of Chicago district traffic office, has been appointed district traffic manager at Philadelphia.

K. M. Bates, Spokane district traffic manager, becomes Toledo district traffic manager, following transfer of Harold Swan, traffic representative at Toledo, to the Cleveland district staff.

George Klein, Chicago reservations department, becomes reservations manager at Seattle to succeed H. H. Murphy.

O. C. Enge, assistant district traffic manager at Seattle, has been named district traffic manager at Spokane.

Glen Jury, formerly of Chicago general traffic office, has returned to United as traffic representative in the Chicago district traffic office.

H. H. Murphy, formerly Seattle reservations manager, has been appointed traffic representative in New York district traffic office.

Nelson Fry, formerly San Francisco traffic representative, becomes an assistant to R. W. Ireland of the Chicago general traffic office.

H. D. Whitney, formerly New York reservations manager, is now an assistant to R. W. Ireland.

Dial Shift, High Power, Voice Clarity In New Transmitters

Claiming the only ground and plane transmitters designed for handling complex traffic of transport operation, Collins Radio Company, Cedar Rapids, Ia., announces production after extensive tests of Collins Autotune equipment.

The system is a new type, high power, quick frequency mechanism, the transmitter design essentially that of a single frequency device except that each of the usual tuning controls has been replaced by a positive positioner, all operated by a central motor drive unit and arranged so the operator may select any of 10 operating frequencies by dialing.

The 17 D (plane) transmitter also dial operated, has been tested for six months as standard equipment on Braniff Airway's DC-2's, conforms in general to tentative requirements proposed for ATC approval by the Department of Commerce, and has been subjected to laboratory experimentation for two years.

"The service given by this equipment definitely indicates it adequately and reliably meets modern airline requirements and provides new facilities contributing to safety and convenience in aircraft operation," plant executives report.

Higher power and greater clarity of voice transmission with high discrimination against extraneous noises are claimed.

Condensed technical specifications of the aircraft transmitter:

Carrier power output: 100 or 175 watts, change being made by shifting only the power output tube and dynamotor capacity.

Frequency shift: Autotune; choice of 10 frequencies in the aircraft band.

Modulation system: High level; class B modulation.

Voice fidelity: frequency response flat from 300 to 3000 cycles with sharp filtering of other frequencies.

Distortion: Less than 5% at 95% modulation.

Dimensions: 20 in. wide, 13½ in. deep, 14 in. high.

Weight: 59½ lbs. with tubes and crystals.

Various types of mountings are available including a shock proof mounted rack to accommodate receivers and other equipment as well as transmitter.

The 203C (ground) transmitter also offers dial operation, 10-frequency service, as well as complete remote control over any long telephone line, allowing transmitter to be placed at any point distant from the operating room where best facilities for installation are available. Transmitter can handle traffic ordinarily requiring several ordinary sets, it is claimed.

Specifications:

Carrier power output: 250, 750 watts, 1kw or 2 kw.

Emission types: phone, CW, MCW.

Frequency range: 2000 to 15,000 kc.

Frequency shift: Autotune; any of 10 frequencies in the range.

Modulation system: High level; class B modulation.

Voice fidelity: Frequency response flat within 1 db. from 300 to 3000 cycles.

Distortion: Less than 5% at 95% modulation.

Keying speed: 60 words a minute.

Power supply: Three phase, 60 cycles, at 5.5 kva.

Control system: Either local or remote over telephone line.

Operating controls include telephone dial, key, microphone, and carrier switch.

Construction: Housed in two metal cabinets 24-in., by 24-in. by 78-in. high.

Removable unit chassis construction with all adjustments protected behind easily removable panels.

Designs of components to provide for 24 hour operation.

A single set of condenser and variable coils are arranged in the aircraft transmitter for continuous tuning over the range of frequencies. Transmitter is ready for broadcasting within 3½ seconds after pilot has dialed.

The modulation system eliminates unwanted noise by filtration and use of a close-talking microphone, uses only voice frequencies between 300 and 3,000 cycles so as to increase effective power "two or three times," keeps frequency response flat in the voice band and with amplitude distortion of less than 5% at full modulation reaches a new degree of clarity of transmission, its makers assert.

Accuracy of positioning of the various control shafts is independent of mechanical backlash or wear, and may be applied to any basic transmitter design. The motor drive system is not related to accuracy of tuning, being used to furnish motive power for the cycle of frequency change from one set of positions to another.

Operation is guaranteed at all altitudes, temperatures, and conditions of humidity, vibration and acceleration.

1st Lockheed For Dutch

Burbank, Calif., Jan. 6—The first of eleven Lockheed "14's" for Royal Dutch Air Lines and its associate company, Royal Netherlands Indies Airways, was completed here yesterday. Deliveries will be made at the rate of one plane every 10 days, Lockheed officials said. The first two planes will be flown in the West Indies, between La Guaira, Curacao, Aruba and Maracaibo.

6 Cities Open Drive for Two Mail Flights

Oklahoma City, Jan. 12—Civic leaders from St. Louis, Kansas City, Wichita, Tulsa, Fort Worth and Dallas met here tonight to plan a fight to restore Braniff Airways and American Airlines air mail schedules discontinued about six weeks ago.

Jerry Sass, vice chairman of the local chamber of commerce, was elected committee chairman. Business men in the cities named will be urged to write and wire congressional delegations to persuade the postal department to restore the service.

American flight was from St. Louis, Tulsa, Oklahoma City, to Fort Worth and Dallas. The Braniff schedule was from Kansas City, Wichita, Oklahoma City, to Dallas and Fort Worth.

Aeronautical Charts

The U. S. Coast and Geodetic Survey, Department of Commerce, has issued the following new sectional aeronautical charts. These cancel previous editions.

Pilots are warned against using obsolete charts. All sectional charts are scaled at 1: 500,000 and priced at 40 cents each, with a discount of 33 1/3 per cent on orders, including assortments, grossing \$10 or more.

ALBANY. October 1937. Size, 20 by 41 inches.

The new radio range from Concord, N. H., now appears on this chart, together with a portion of the lighted route from Boston to Montreal. Beacons numbered 9 to 13 were added and other changes made in radio facilities and airports.

BIRMINGHAM. October 1937. Size, 20 by 46 inches.

Partial revision of topographic features, and changes in the aeronautical features, including the addition of a small radio range at Montgomery, Ala.

BOSTON. October 1937. Size, 22 by 28 inches.

Changes in aeronautical data includes new radio ranges at Concord, N. H., Westbrook, Maine, and a small one at Warwick, R. I., together with the realignment of the southeast course of the Boston radio range. New beacons added on Boston-Montreal and Boston-Bangor routes.

CHATTANOOGA. November 1937. Size, 20 by 45 inches.

Revision of aeronautical features, showing new radio range at Smithville, Tenn., and a realignment of the radio range at Chattanooga. Radio range at Murfreesboro, Tenn., deleted. Other changes made in airport beacons.

CHEYENNE. October 1937. Size 20 by 41 inches.

Airports and beacons revised and the addition of a new radio range at Laramie, Nebr. Minor changes in topographic features.

CHICAGO. October 1937. Size, 20 by 42 inches.

Realignment in radio range at Ft. Wayne, Ind., and revision of other aeronautical data.

DETROIT. October 1937. Size, 20 by 41 inches.

This edition indicates additions, deletions, airports and beacons, radio facilities, and minor changes of topographic features.

NASHVILLE. November 1937. Size, 20 by 44 inches.

Radio range at Murfreesboro, Tenn., deleted; radio range added at Smithville, Tenn.; and the northeast leg of the radio range at Nashville realigned. Other aeronautical data revised.

TWIN CITIES. November 1937. Size, 20 by 39 inches.

Addition and deletions of airports, beacons, and the realignment of the radio range at Minneapolis. Other radio facilities changes.

AUSTIN. December, 1937. Size 20 by 47 inches.

Aeronautical features revised, including new radio range at Navasota, Tex. Other changes in topographic features, including the addition of Lake Brownwood.

DEL RIO. November, 1937. Size 20 by 43 inches.

General revision of topographic and aeronautical features.

WILLISTON. October, 1937. Size 20 by 37 inches.

Complete revision, including additions and corrections resulting from flight check.

CANADA

CANADIAN VICKERS, LTD., of Montreal, has been awarded a contract for nine more Northrop "Delta" aircraft and three more Stranraer flying boats for use in the Royal Canadian Air Force, the Department of National Defence announced Jan. 10. The contract is estimated to amount to \$1,100,000. The Northrop planes will cost \$40,000 each and the flying boats \$750,000 each. Seven of the same type flying boats and four "Deltas" were completed by previous order in October. The new order comes out of the \$35,000,000 defense estimates passed last year by Parliament.

THE LINK MANUFACTURING COMPANY, established last year at Gananoque, Ont., announced on Jan. 15 that it had been awarded a \$1,200,000 contract from the British Government for the construction of 150 aviation Link trainers. The electrically-controlled trainers are the invention of F. A. Link, of the U. S., and will be used to instruct British pilots in instrument flying.

FLEET AIRCRAFT CO. of Fort Erie, Ont., announced Jan. 11 that it has received orders for 70 new planes of various types, part of which are for export and the remainder for the Canadian Government. Ten airplanes are being built for the National Defence Department.

FAIRCHILD AIRCRAFT, LTD., Longueuil, Que., has asked bids for construction of an extensive addition to its plant.

DEHAVILLAND AIRCRAFT OF CANADA, LTD., has reported for the year up to Sept. 30, 1937, net income of \$3,338, equal to \$1.23 each on 2,705 preferred shares, against \$1.659 or 61 cents a share in the preceding fiscal year.

CANADA'S ONLY DIRIGIBLE mooring mast, erected in 1929 at St. Hubert's Airport, Montreal, to receive the R-100, was sold for scrap iron Jan. 14. Located in the center of the airport, authorities considered it a menace to airplanes.

EDMONTON, ALBERTA. Jan. 17—Alfred Pierce, of this city, has been appointed agent for Canadian Airways at Yellowknife.

M. M. Elliott Appointed

Montreal, Jan. 24—R. M. Brophy, general manager of the Canadian Marconi Company, makers of aircraft radio, has announced the appointment of M. M. Elliott as general sales manager of the company. Elliott will be assisted by J. V. Argyle as manager of inland communications, and R. W. Doane as assistant sales manager of the broadcast receiver, radiotron and industrial parts division. Prior to joining the Canadian Marconi Company in 1931 as assistant sales manager, Elliott was president of Singer and Elliott, distributors of radio receivers and electrical equipment.

Tentative Canadian Schedule

Tentative schedules for Trans-Canada Airlines which expect to start operation before 1939, call for an eastbound departure from Vancouver daily at 3 p. m., arrival in Regina at 11 p. m., and landing in Montreal at 6 a. m. the next day. Feeder line planes leaving Edmonton after 6 p. m. will connect with the main line at Lethbridge. Westbound planes would leave Montreal at 6 p. m., arriving in Vancouver at 10 a. m.

Big Air Freight Job

Edmonton, Alberta, January 11—Canadian Airways next month will handle one of the biggest commercial air freighting jobs ever assigned when more than 100 tons of equipment for Consolidated Mining and Smelting Company's hydropower development at Goldfields arrives here for air shipment. Largest single piece is a one-ton steel boom 18 feet long, 36 inches wide, 18 inches deep.

The "flying box car," largest commercial air freighter in Canada, will handle the job. It has a 5,000 pound loading capacity.



Photo of the 17D transmitter for planes showing test dial.

SPERRY ANSWERS MONOPOLY CHARGE

Denies FTC Complaint; Says Combination of Companies Will Save Waterbury Tool Co.

In a ten-page letter together with two exhibits, Sperry Corporation on Jan. 14 replied to the Federal Trade Commission's charges that the company had violated Section 7 of the Clayton Act by acquiring the capital stock of two competing corporations. Sperry asked that the complaint be dismissed.

The Waterbury Tool Company and Vickers, Inc., were the two companies named in the Commission's complaint and Sperry Corp. denied that the acquisition of their stock would create a monopoly in supplying pumps and hydraulic transmissions to the United States Navy. Attached as an exhibit were the names of 99 other companies which had sold such articles to the Navy between Jan. 1, 1936 and Dec. 1, 1937.

Another exhibit was also submitted containing the names of 188 pump companies in the United States.

"The respondent states that the total volume of business done by the Waterbury Tool Company and Vickers, Inc., is less than two per cent of the total business done in the United States, and avers that the competition in said products has not been in any wise lessened or adversely affected by the acquisition of their stock by the respondent," the letter said, in referring to this latter exhibit.

Sperry states that there was not substantial competition between the two companies named, because of the fact that they reached different markets. "Waterbury makes hydraulic transmissions suitable for use in paper mills and rayon plants. Vickers has never made pumps of this kind. While the two may have used the same electric motors, their pumps were different in mechanical design and their commercial applications have never been in conflict or competition," the Sperry letter stated.

Again referring to Navy business, Sperry avers that Vickers has only sold to the Navy under "restricted or confidential" schedules and has never bid upon pump schedules which are open generally to all approved manufacturers. Waterbury submits bids on the open advertisements.

The letter said that the only control Sperry exercises over its subsidiaries is that it elects the boards of directors which, together with the respective officers of the subsidiaries, control the activities of the corporations.

The Waterbury Tool Company had been losing money steadily and it appeared it would go into bankruptcy unless it was reorganized, Sperry said. "Since acquisition of the stock of Waterbury, Sperry has advanced it \$300,000 additional capital and extended it a loan of \$180,000. Most of the company's patents had expired. It does not possess and probably could not obtain sufficient commercial business to keep going after curtailment of the Navy building program. The products of Vickers are protected by patents, permitting it to successfully operate a commercial business. The respondent believes that combining the two companies will open up for Waterbury business not otherwise available. The joint ownership will also increase facilities for confidential Navy business and improve the quality of highly technical equipments."

HARRY A. BRUNO and Associates, public relations counsel, have opened new offices at 30 Rockefeller Plaza, New York City.

Argentina Leads Dec. Aeronautical Buyers

Argentina and Japan were the two leading buyers of American aircraft, engines and accessories during the month of December, with 15 other countries being granted licenses for aircraft products in excess of \$10,000. Argentina was far in the lead for the month by virtue of the reissuance of a license previously granted in September, 1937. The new license authorized the exportation of \$1,366,440.00 worth of materials, making Argentina's total for the month \$1,532,822.14. China, the leader during November, fell to fifteenth place.

Export licenses issued by the Secretary of State during December were as follows:

Argentina	\$1,532,822.14
Japan	250,000.00
Mexico	136,165.00
Netherlands	134,581.57
Germany	70,000.00
Poland	65,931.75
Honduras	64,750.00
Brazil	46,006.00
Canada	31,565.20
Costa Rica	30,200.00
Nicaragua	25,297.00
Netherlands Indies	18,774.78
Russia	17,582.55
Finland	15,800.00
China	14,930.77
Hong Kong	13,500.00
Austria	11,000.00

Other countries buying smaller amounts included Australia, Colombia, Denmark, French West Africa, India, Turkey and the Union of South Africa.

OTTAWA PLANT TO CLOSE

Armstrong Siddeley Motors Ceases Operations Soon

The closing soon of the Canadian aircraft plant at Ottawa owned by Armstrong Siddeley Motors, Ltd., has been announced by the firm.

Operated in conjunction with Ottawa Car Manufacturing Company, Ltd., Armstrong Siddeley was established in Canada about 10 years ago and the plant has been under management of Capt. Maurice Windsor during that time.

Insufficient business for profitable operation was given as the reason for dissolution.

Bergen Elected Director

John J. Bergen, Wall Street broker, has been elected a director of the Grumman Aircraft Engineering Corp., Farmingdale, L. I.

Warren Burke to UAL

San Francisco, Jan. 14—Warren Burke, former district traffic manager for TWA here, has been appointed to the San Francisco traffic staff of United Air Lines, according to announcement by Steve Stimpson, western UAL manager. Story of his leaving TWA was carried in the Jan. 1 issue. Burke has had long experience in traffic work and is well known on the Coast.

United Radio Ads

Appropriations for radio advertising in 1938 by United Air Lines may be increased over the amount spent last year, \$5,000, according to reports. The bulk of the 1937 expenditure was for spot, or brief announcements, on KFI and KHJ, Los Angeles, and KFRC, San Francisco.

Lutz Resigns

New York, Jan. 3—Frederick W. Lutz, general manager of the Fairchild Aerial Camera Corporation, resigned his position recently to become vice president of the W. L. Maxson Corporation of New York, makers of computing machines.

AIRCRAFT ENTERPRISES, Inc., New Orleans, La., has been appointed state Cub distributors.

MARTIN'S BACKLOG NOW \$17,500,000

Gardner Carr's Resignation Announced; Hartson Promoted and Two Vice-Presidents Elected

Baltimore, Jan. 18—The Glenn L. Martin Company announced that on Jan. 1 its backlog of unfilled orders exceeded \$17,500,000, the largest backlog in the company's history.

This new record, Mr. Martin said, "reflects the progress already made by the company in its program of expansion, advanced technical developments and increased production."

At the meeting of the board of directors, Joseph T. Hartson was designated as executive vice-president, while Harry F. Bollmer was elected vice-president of manufacturing and B. C. Boulton vice-president of engineering. Mr. Boulton was also elected a director.

Mr. Martin has also announced the resignation of Gardner W. Carr as vice-president and director. Mr. Carr came to the Martin Company something over a year ago from the Boeing Airplane Company in Seattle.

John W. Castles, of Smith Barney & Co., New York, was elected director and member of the executive committee to fill the vacancy left by John W. Hanes, who resigned these posts after he was appointed a member of the Securities and Exchange Commission.

Mr. Martin reports the new factory addition is being rapidly completed. He anticipates that manufacturing economies will be possible "which we expect to be reflected in increased production and sales."

Interstate Gets \$3000 Job

Inglewood, Cal., Jan. 15—Interstate Aircraft and Engineering Corporation here has been awarded two contracts aggregating \$3,000, for manufacture of two items of aircraft armament.

Although company officials declined for military reasons to disclose details of the products, they did say they are parts which the air corps furnish aircraft builders in the same manner as instruments or guns.

The contracts are from Wright field and are said to be the first for articles of this nature to be given a western manufacturing organization.

Bendix Cuts Force

Bendix Radio laid off from 10 to 12% of its employees as of Feb. 1 and has stopped development work on a number of important projects. One project left in the air is a drift indicator and another is a sound recording device to make permanent records of all two-way radio conversation.

Ray Lansing Promoted

New York, Jan. 6—Appointment of Raymond L. Lansing, general manager of the Eclipse Aviation Corp., subsidiary of Bendix Aviation Corporation, as general manager of the New Jersey division of the parent company, has been announced. Benjamin H. Gilpin was appointed works manager and Charles H. Knock, controller.

SOLAR HITS RECORD

Price Reports Backlog Sufficient For 6-Mos. Capacity

San Diego, Jan. 10—Edmund T. Price, president of Solar Aircraft Company, has reported that 1937 sales for his firm approximated \$400,000, an all-time record, while the backlog of unfilled orders stood at \$260,659, enough to keep the plant in full production for six months.

Price has announced plans for construction of an additional building to eliminate overcrowding and to provide better routing of plane parts.

A new record was set Dec. 11 when sales for four weeks amounted to \$48,047, with net profits, after taxes, of \$5,864. This is equivalent to 4½ cents earned a share on 129,640 shares of \$1 par capital common stock outstanding. The plant is operating with 177 employees.

HAVEN PAGE, a director of Air Associates, Inc., has resigned as an attorney for the Reconstruction Finance Corporation and has opened a law office for general practice in the Hibbs Building, Washington, D. C.

CLASSIFIED ADS

7c per word—minimum charge \$1.00—Payable in advance

TAKE NOTE

SUPREME WOOD PROPELLERS

Now permanently being manufactured in Detroit, Full stock on hand. Also stocked at Aircraft Steel & Supply Co., Wichita, Kansas.

SUPREME PROPELLER CO.

26350 Gratiot Avenue, Detroit suburb, Roseville, Michigan

SHIPS FOR SALE

Bellanca Skyrocket. 450 h. p. Wasp SC1. Flown less than 100 hours since complete overhaul of ship and engine at their factories. 1,000 mile range. Complete instruments. Price reasonable. Box 107, American Aviation.

SALE 1937-37 WACO 5 Place. 225YKS JACOBS 70 gals.—Pants—Special Gauges—Bank & Turn—Rate of climb—\$1600 Worth Radio Compass—Transmitter (2 Bands)—Receiver (3 Bands) 200 hours. In perfect condition. Ready for blind flight instruction. Represents over \$7200. Make offer. J. D. Burnham, Valley Road, Paoli, Pa.

BUSINESS MAN—PILOT

Responsibly employed without interruption for over fifteen years in sales, banking and business management. Now well connected but desire change to closer association with aviation. Excellent business and flying record. 2-A commercial transport license and Army airplane pilot rating. Familiar with many types up to 700 horsepower. Extensive cross country experience. Army trained, also night, instrument and radio. No accidents of any kind. Particularly qualified for sales work involving use of airplane, representative of aviation interests or personal pilot and executive secretary. Interested only in connection with substantial background. Age 37. Box 108, American Aviation.

FRANK AMBROSE, INC.

Dealers and Exporters

AIRPLANES, ENGINES, PART SUPPLIES.

Office: Whitestone, New York
Storeroom: Roosevelt Field, Mineola, N. Y.

HAVE YOU A PRODUCTION PROBLEM?

Let us help you solve it. Our stainless steel rudders, ailerons, surfaces and tanks are now going into U. S. Army regular service.

THE STAINLESS STEEL SPECIALISTS

FLEETWINGS

Incorporated Bristol, Pennsylvania Phone Bristol 867

CONTRACTS

The Department of Labor announced the following contracts, amounting to \$3,361,747.46, signed during the week ended Jan. 13 by various government agencies:

Cowden Manufacturing Co., Kansas City, Mo., mechanic suits, Army Air Corps, \$73,720.00.
Weyerhaeuser Sales Co., St. Paul, Minn., lumber, Army Air Corps, \$27,722.75.

Grand Rapids Varnish Corp., Grand Rapids, Mich., dope and thinner, Army Air Corps, \$43,504.62.

Rohm and Haas Co., Philadelphia, Penna., transparent sheet, Army Air Corps, \$71,837.55.

Sidney Machine Tool Co., Sidney, Ohio, lathes, Army Air Corps, \$30,384.80.

Wadell Engineering Co., Newark, N. J., valve grinders, Army Air Corps, \$44,922.25.

B. G. Corp., New York City, spark plugs, Navy, \$14,631.00.

Bendix Products Corp., South Bend, Ind., wheel and brake assemblies, Army Air Corps, \$38,960.00.

Hayes Industries, Inc., Jackson, Mich., wheel and brake assemblies, Army Air Corps, \$53,155.00.

Air Cruisers, Inc., Clifton, N. J., inflation equipment, Army Air Corps, \$25,797.50.

Magnaflex Corp., Chicago, Ill., magnetic apparatus, Army Air Corps, \$58,995.73.

Air Cruisers, Inc., Clifton, N. J., cylinder assemblies, Army Air Corps, \$161,681.50.

Walter Kidde and Co., Inc., New York City, cylinder assemblies, Army Air Corps, \$80,622.00.

Breeze Corp., Inc., Newark, N. J., starter assemblies, Army Air Corps, \$106,635.62.

Kline Manufacturing Co., Columbus, Ohio, control assemblies, Army Air Corps, \$36,984.24.

Pioneer Instrument Co., Brooklyn, N. Y., regulator assemblies, Army Air Corps, \$64,407.50.

Eclipse Aviation Corp., E. Orange, N. J., starter assemblies, Army Air Corps, \$154,466.00.

Fleetwings, Inc., Bristol, Penna., steel wings, Army Air Corps, \$38,500.00.

United Aircraft Corp., Hamilton, Standard Propellers Division, E. Hartford, Conn., propeller assemblies, Army Air Corps, \$133,340.40.

Eclipse Aviation Corp., E. Orange, N. J., alternator assemblies, Army Air Corps, \$27,778.00.

Keuffel and Esser Co., Hoboken, N. J., drift meter assemblies, Army Air Corps, \$177,450.00.

Bausch and Lomb Optical Co., Rochester, N. Y., drift meter assemblies, Army Air Corps, \$65,000.00.

Curtiss-Wright Corp., Curtiss Aeroplane Division, Buffalo, N. Y., airplanes and parts, Navy, \$1,828,051.00.

United Aircraft Corp., Pratt and Whitney Aircraft Division, E. Hartford, Conn., engine parts, Treasury, amount indefinite.

Wright Aeronautical Corp., Paterson, N. J., engine parts, Treasury, amount indefinite.

The Department of Labor announced the following contracts, amounting to \$126,678.36, signed during the week ended Jan. 20 by various government agencies:

Standard Oil Company, Chicago, Ill., engine fuel, Army Air Corps, \$11,455.50.

Standard Oil Company, Cleveland, Ohio, engine fuel, Army Air Corps, \$14,546.30.

Shell Oil Company, San Francisco, Calif., engine fuel, Army Air Corps, \$12,390.00.

Shell Petroleum Corp., St. Louis, Mo., engine fuel, Army Air Corps, \$12,504.60.

Phillips Petroleum Co., Bartlesville, Okla., engine fuel, Army Air Corps, \$20,814.71.

Standard Oil Company of Kentucky, Louisville, Ky., engine fuel, Army Air Corps, \$21,314.20.

Ex-Cell-O Corp., Detroit, Mich., gage and wrench assemblies, Army Air Corps, \$21,659.05.

Franklin Machine Products Company, New York City, aircraft equipment, Army Air Corps, \$12,004.00.

Contract to Chance Vought

The War Department Jan. 20 announced that Chance Vought division of United Aircraft Corp., East Hartford, Conn., has been awarded a contract for 58 scout bombers, costing \$3,525,694.60.

BAC Contract Changed

Federal Telegraph Company's contract with the Bureau of Air Commerce for furnishing radiotelephone and radio range beacon signal transmitters has been lowered from \$517,564.51 to \$481,624.74. The Bureau had originally advertised for equipment for 39 stations but later changed this to 36, deleting the ones at North Platte, Seattle, and Portland. The final price was computed by adding \$83.35 to the unit price of the remaining stations.

Army Awards Contracts

The War Department on Jan. 4 announced the awarding of two contracts, amounting to \$1,185,322.26, to the Pratt and Whitney Division of United Aircraft Corporation, East Hartford, Conn. One contract, amounting to \$318,521.67, covers the purchase of spare parts for 315 model R-1830-13 engines, now serving as power plants in P-26A airplanes. The other contract is for 142 engines and spare parts, costing \$866,800.59. These engines will be used in BC-1 planes now being constructed by the North American Aviation Corp.

163 Contracts Awarded

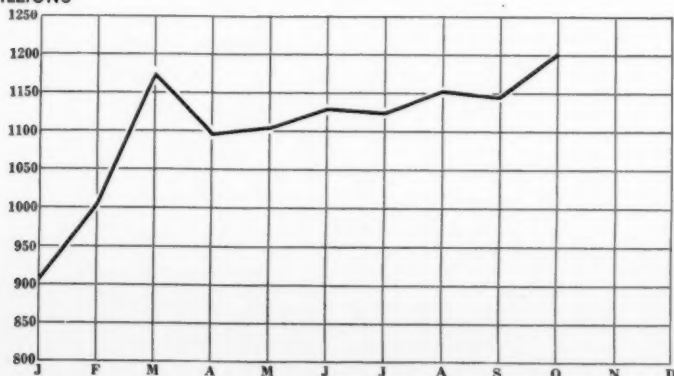
The Department of Labor has announced that during the last quarter of 1937, 163 contracts valued at \$21,811,162.46, were awarded by various government agencies for airplanes and parts. These contracts amount to 6.73 percent of the grand total of 5,777 contracts awarded, standing fifth on the list.

PCA Awards Contract

Pittsburgh, Penna., Jan. 20—Pennsylvania-Central Airlines has awarded a contract to the aviation department of the Gulf Oil Corporation for oil for the ensuing year, Major Al Williams, manager of the department announced recently.

Air Mail Pound Miles Performed

MILLIONS



AVIATION STOCK TRENDS

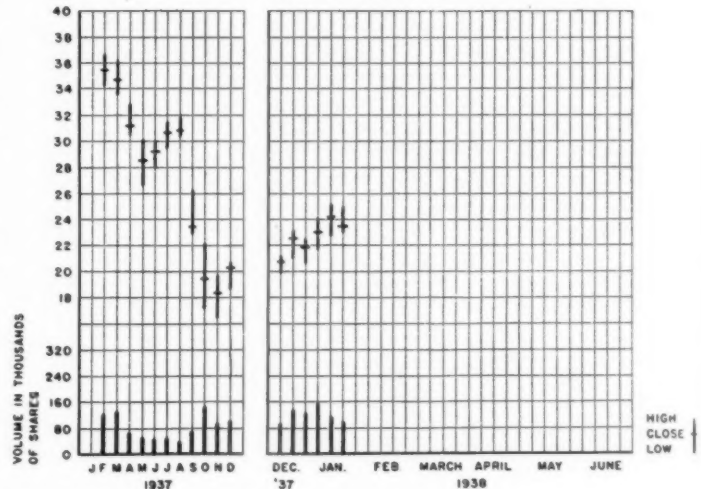
WEEKLY AVIATION AVERAGES
(1937-1938)

Chart Figures Supplied by Wyckoff Associates, Inc. Comments by Philip P. Friedlander

To predict the next move in the aviation group is rather difficult. The problem presented is whether, after a run-up such as the aviation averages have had since October, there is not some technical correction of sizeable proportion due; or, whether the recent consolidating action is sufficient to generate strength for a new forward move. Normal action calls for one-third to one-half correction, but, strangely enough, the aviation stocks have shown no real weakness, and appear to meet good support on every minor set-back.

Studying the situation, we find that the low of the move was 12.66. The high, 24.94. When on rallies the averages reach the 24 area, definite supply appears. Then on sags when

they reach 23, support comes in. The maneuver, we know, will not continue much longer. But there is no way of definitely determining the trend until the averages either break through the upper crust, or penetrate the lows of the trading areas.

If the general market reacts further, it can be predicted with some assurance that the aviation securities will come down. A move into lower territory should find support around 21-20. However, after a period of backing and filling, if the general market turns up, there is a good possibility that once the 24 zone is negotiated, aviation stocks can climb to 26-28.

Watchful waiting, however, should be the policy of prudent and careful investors.

LEADING AVIATION STOCKS

NEW YORK STOCK EXCHANGE

	Week Ending Jan. 15				Week Ending Jan. 22			
	High	Low	Net Change	Sales	High	Low	Net Change	Sales
Aviation Cp. of Del. ..	4½	4½	+ ¾	21,500	4½	4½	— ¾	6,600
Bendix Aviation	14½	13¾	+ 1	23,500	14½	13¾	— ¾	8,000
Boeing Airplane	35	32½	+ 1½	45,500	35½	32½	— 2	37,100
Consolidated Aircraft	19½	17½	+ ½	13,900	19½	16½	— 1½	12,300
Curtiss-Wright	5¼	4¾	+ ¾	89,500	5¼	4¾	— ½	33,500
Curtiss-Wright A	18½	17	+ 1¼	31,500	18½	17½	— ¾	15,300
Douglas Aircraft	45	41½	+ 3¼	33,300	46½	43	— 1½	37,700
Glenn L. Martin	21½	19½	+ ½	21,200	21	19½	— ½	28,500
Natl. Aviation Corp.	10¾	9¼	— 1	1,600	9¾	8½	— 1½	3,500
N. American Aviation	10½	9¾	+ ¾	36,900	10½	9¼	— ¾	21,500
Sperry Corp.	21½	18¾	+ 17	63,600	21½	19¾	— ¾	55,900
Thompson Products ..	15½	14½	+ ¾	1,700	15½	14	— 1½	600
TWA	7½	6¾	+ ¾	6,200	7½	6½	— ½	2,600
United Air Lines	8½	7¾	+ ¼	10,000	8½	7½	— ¾	10,100
United Aircraft	27½	24¾	— ½	51,300	27	24½	— 1½	36,200

NEW YORK CURB EXCHANGE

	Week Ending Jan. 15				Week Ending Jan. 22			
	High	Low	Net Change	Sales	High	Low	Net Change	Sales
Aero Supply A	17	16½	— ½	200				
Aero Supply B	4½	3¾	+ ¾	2,500	4	3¾	— ¼	2,400
American Airlines	12½	11	— ¾	900	11½	9½	— 1½	1,600
Beech Aircraft	2½	2	+ ½	1,200	2	2	—	300
Bell Aircraft	15½	14½	+ ¾	2,900	15½	14½	— ¾	1,000
Bellanca Aircraft	4½	4	— ½	2,000	4	3¾	— ½	500
Breeze Corp.	7½	6¾	+ ¾	1,300	7	6¾	— ¾	300
Brewster Aero	5¼	4¾	+ ½	9,400	5¼	4¾	— ¾	1,900
Fairchild Aviation	3½	3¾	— ½	500	3½	2½	— 1	700
Irving Chute Co.	12	10¾	+ 1¾	1,100	12½	10½	— 1½	700
Lockheed Air	10½	8½	— 1	30,600	9¾	8½	— ¾	13,100
Pan American Air	18½	17½	— 1	2,300	18	16½	— ¾	1,600
Seversky Aircraft	2½	2½	—	6,900	2½	2	— ½	1,000
Waco Aircraft	3½	3	— ¾	900	3½	3	+ ½	200
Western Air Express ..	4½	3½	+ ¾	1,300	4½	3½	— ¾	700

Beech, Menasco File Stock Issues, Stearman-Hammond Asks Increase

Registration for Beech Is 364,349 Shares, Menasco 79,375 Shares;
Fairchild and Consolidated File
Reports Listing Changes

The following have filed applications with the Commission for registration of securities on national securities exchanges as follows:

Beech Aircraft Corp.—(N. Y. & San Francisco Curb): 364,349 shares of \$1 par value common capital stock, issued. 125,000 shares of \$1 per value common capital stock to be registered on notice of issuance. None of 125,000 shares to be sold to public for cash. Private sale for cash: 40,000. 20,000 to be sold at once upon registration and approval of the listing application and 20,000 more on or before May 15, 1938. Net proceeds, \$100,000. \$80,000 to be used for payment of bank loans and reimbursement of treasury of the corp. for payment made upon bank loans Nov. 1937; \$20,000 for increase in inventory of raw materials and parts, and to add to corp. funds for general corporate expenses.

Securities subject to options, 85,000. 28,333 shares at \$2.50 a share; 28,333 at \$3; 28,334 at \$3.50. Expiration of these options is Dec. 16, 1939.

Persons holding such operations:

To Walter H. Beech, president and general manager, 8,333 at \$2.50 a share; 8,333 at \$3.00 a share; 8,334 at \$3.50 a share.

To officers and employees, allocation of warrants to be made by Walter Beech; 20,000 at \$2.50 a share; 20,000 at \$3 a share; 20,000 at \$3.50 a share. Proceeds to be used for additional working capital.

Menasco

Menasco Manufacturing Co.—(Los Angeles Stock Exchange and San Francisco Curb Exchange). Registers issuance of 79,375 shares, making 396,875 shares of common capital stock of \$1 par value, the only class of stock outstanding or authorized for issuance.

Changes to be effected: Paid-in-surplus account reduced by \$5,950; fee for services and expenses to G. Brashears Company, which account will then show balance of \$151,966. Balance of proceeds derived from sale of 79,375 shares, \$73,425, will be used as far as is determinable, as follows: Development expense, \$10,000; tooling, jigs and patterns, \$12,000; additional production machines, \$8,000; retirement of bank loan, \$15,000; additional working capital, \$27,425; miscellaneous expenses pertaining to issuance of stock, \$1,000.

Stearman-Hammond

The following companies have filed reports with the S. E. C. on form 8-k, showing certain special changes which have occurred since their registration statements became effective or their last annual or current report was filed:

Stearman-Hammond Aircraft Corp.—Amendment of articles of incorporation, filed Sept. 10, 1937. Changed par value of outstanding 286,800 shares from \$1.25 per share to 62½ cents per share; increased authorized capital from 400,000 shares of the par value of \$1.25 per share to 1,000,000 shares of the par value of 62½ cents per share. Increased its authorized number of directors from 5 to 7.

Amount of reduction in the stated capital from \$358,500 to \$179,250 will be credited to deficit arising from operations to Dec. 31, 1937, and a portion thereof may be credited to commissions on sales of capital stock shown on balance sheet in the sum of \$50,000,000.

Fairchild

Fairchild Aviation Corp.—Under agreement dated Sept. 7, 1937, between registrant and James S. Ogsbury, president and director, an unassignable option was granted to Mr. Ogsbury to purchase, at any time prior to Dec. 31, 1941, not exceeding 10,000 shares of the authorized but unissued common stock at \$4.50 per share. By terms, Mr. Ogsbury cannot purchase more than 2,000 such shares in any one year (1937 through 1941) unless the additional number of shares shall not exceed the difference between 2,000 shares a year for each prior year and the number of shares actually purchased during such year. Option to expire upon death or upon termination of agreement. Option granted as further compensation for services.

Consolidated

Consolidated Aircraft Corp. (N. Y. and San Francisco Stock Exchanges)—180 shares of conv. \$3 preferred stock, without par value, surrendered to the corporation for conversion. (Reducing authorized shares of pref. stock without par value from 60,000 to 59,820 shares and the authorized shares of the series thereof known as convertible \$3 preferred stock from 24,000 shares to 23,820). The 180 shares converted into 360 shares of common stock of the par value of \$1 per share as provided by certificate of incorporation.

The charter of Fleet Aircraft, Inc., (Delaware), an inactive and wholly owned subsidiary of Consolidated Aircraft Corp., was sold to Major R. H. Fleet, president of Consolidated, for a nominal consideration, such sale and consideration having been authorized by a resolution adopted at a meeting of the board of directors of June 8, 1937. SEC statement signed by R. H. Fleet, president, and R. A. Stanberry, Dec. 10, 1937.

Following is an official summary of transactions and holdings of officers, directors and principal stockholders of corporations with equity securities registered, filed with the Securities & Exchange Commission Dec. 11 to 31, inclusive. Unless otherwise indicated transactions were made in November and holdings are as of the end of that month:

Stearman Hammond Aircraft Corp.—Lloyd Stearman, officer, decreased common 1,000 to 21,660.

Thompson Products, Inc.—Frederick C. Crawford, officer and director, received 600 common in settlement of account receivable and sold 600, holding 9,754.

Transcontinental & Western Air.—Marco F. Hellman, director, decreased common 400 to 900.

Western Air Express.—L. H. Dwerlottle, officer, (Oct. 1937) increased common 200 to 202.

Following is a tabulation of equity holdings of officers, directors and principal stockholders of companies any of whose securities have become registered with the Commission. Month covered is indicated in each case:

Bendix Aviation Corp.—Ernest R. Breech, director. None. Dec. 1937.
United Air Lines.—R. W. Schroeder, officer. None. Oct. 1937.

BECAUSE NORTHWEST AIRLINES would offer only \$50 a month rent for office space in his hangar at Yakima, Wash., Charles McAllister, of the McAllister Flying Service, has refused to accept the airline as a tenant. County commissioners are trying to arbitrate.

W. S. Thompson Elected

Montreal, Dec. 18—Trans-Canada Air Lines yesterday announced the appointment of Walter S. Thompson as director of publicity for the company. Thompson has been director of publicity for Canadian National Railways and has handled publicity for Trans-Canada Air Lines since its formation last April. He will also continue as publicity director for Canadian National Railways, Steamships and associated enterprises.

CAPT. P. G. TAYLOR, who accompanied Kingsford Smith on his flight from Australia to California in 1934, is planning a survey flight across the Indian Ocean between the west coast of Australia and Mombasa, Africa, Sydney dispatches say.

Canadian Services Merge

Edmonton, Alberta, Jan. 15—Through a merger with R. L. Coote's Flying Service, of Vancouver, United Air Transport, Ltd., has taken over two additional planes, Grand McConachie, United president, announced today. Coote will fly for United. He took over the pilot work on the new Ashcroft to Fort St. John service which links up with the Edmonton-Whitehorse weekly air mail route, but will return soon to Vancouver to fly regularly from that city to mining areas on Victoria Island. Ted Feld has been promoted to become chief pilot for United. McConachie expects to concentrate on executive work in the future.

Here's a Testimonial That Would Make Even Lizzie Zilch Get Up and Dance—

ROGER WOLFE KAHN

ORCHESTRATOR

660 MADISON AVENUE

NEW YORK CITY

REGENT 4-0400

January 3, 1938

American Aviation
647 Earle Building
Washington, D. C.

Gentlemen:

Please accept my most sincere congratulations on your handbook of Civil Air Commerce Regulations. It is without question the most comprehensive and intelligently compiled booklet that I have ever read. Not only does it come at a psychological time but also it completely clarifies the rather difficult and decidedly baffling changes in air commerce regulations. I assure you that during the past two months I have read the new regulations many times both in reprints from magazines and also in special notice forms received from various sources including the original direct from Washington and I can frankly say that not until I read your book was I able to grasp a thorough understanding of the situation.

I enclose herewith my check in the amount of \$4.00 covering the cost of one wall map 29" x 38" plus a one year subscription to your magazine.

Will you be good enough to send both the above mentioned to my office at 660 Madison Avenue, New York City.

Very Truly yours,

RWK:b

Enclosure

Thanks a million, Roger! As the owner of a Lockheed Electra and a Fairchild 24, you know a good thing when you see it.

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MR. AIRLINE EXECUTIVE—

Is your line still using the Farmers Mutual?

You have seen to it that your airline has been equipped with the latest ships with constant-speed propellers, gyro-pilots, high-powered engines, the finest flight equipment you can buy. But you may not realize that much of the two-way radio equipment in use today is the counterpart of the "Farmers Mutual" rural telephone. This equipment is reliable, of course, and has given you good service in the past, but your requirements for radio facilities have been increasing every year and you now have urgent need for a radio communication system which is the equivalent of a modern automatic dial telephone exchange.

The Collins 17D 175 Watt Autotune Aircraft Transmitter and the Collins 203C 1,000 Watt Autotune Ground Transmitter have been developed to give you all the communication facilities demanded in modern airline operation. In this

equipment the exclusive Collins Autotune principle provides the one complete answer to the frequency-shift problem by entirely eliminating troublesome r-f relays and the multiplicity of tuned circuits which have characterized all previous equipment. Greatly increased power assures contact under bad conditions when you most need two-way radio.

May we suggest that you talk to your radio engineer and ask him for a report as to the limitations of existing equipment? We believe that he will tell you that he has urgent need for the increased frequency shift facilities and the increased power now available for the first time in the Collins 17D and 203C Autotune Transmitters. This new equipment will give you a really modern communication system and will increase safety, help maintain schedules, handle more traffic and reduce maintenance expense.



17D TRANSMITTER
1st 10 frequency set in aircraft service. Highest power in this type produced. Lowest weight per watt.



203C GROUND TRANSMITTER
1st 10 frequency 1 kw. transmitter. Design developed expressly for airlines.

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